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SHANGHAI WORLD EXPO GUIDE 2010

EXPO 2010 SHANGHAI CHINA

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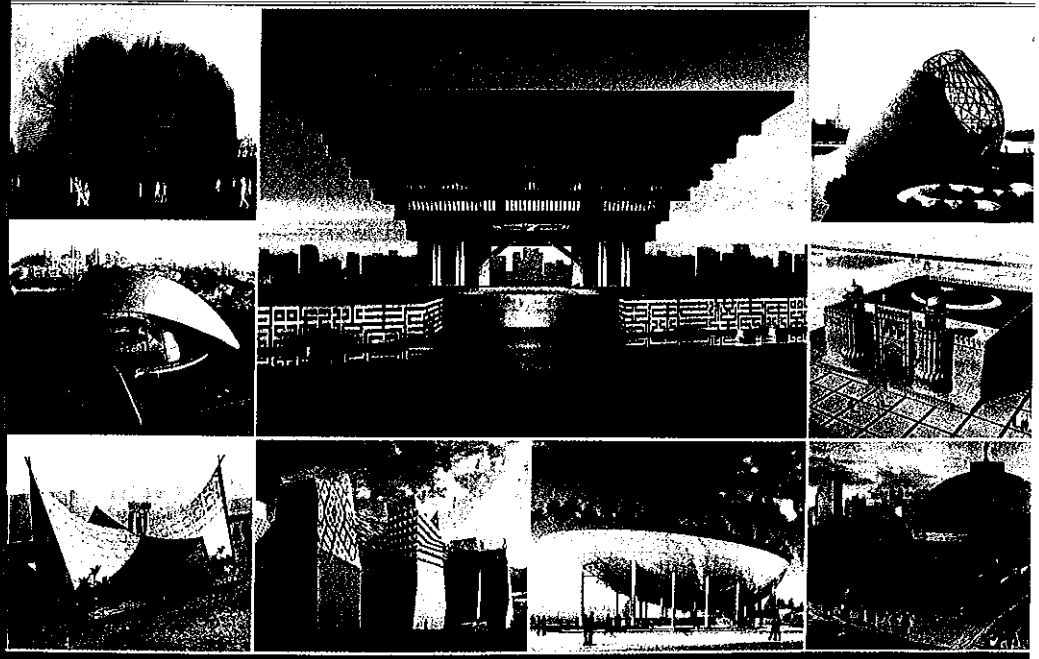

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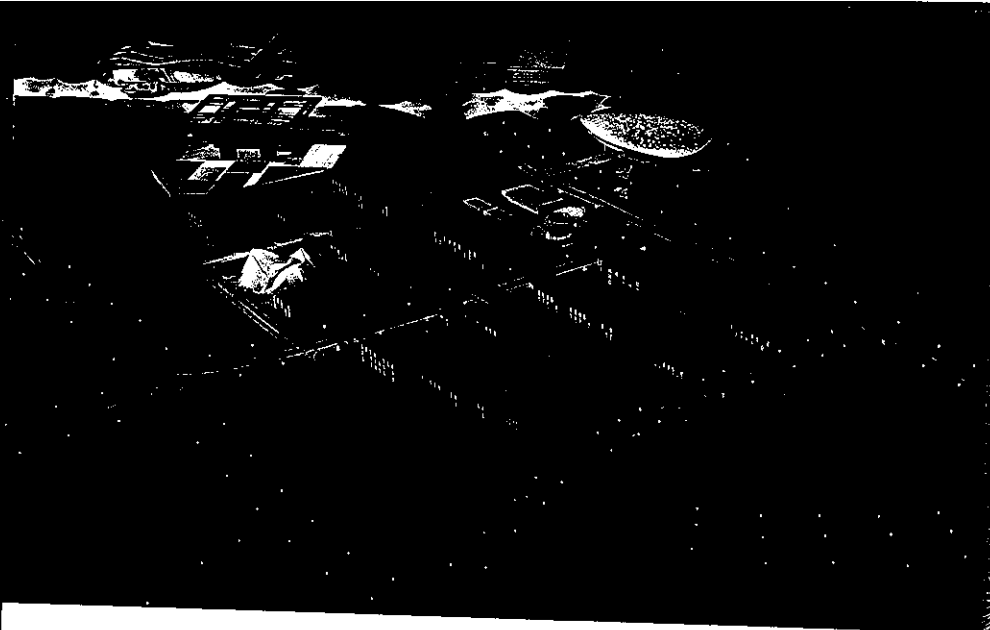

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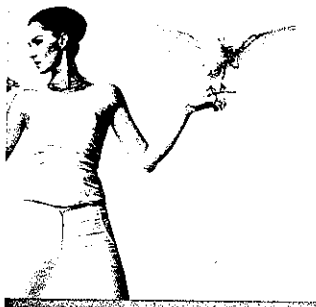

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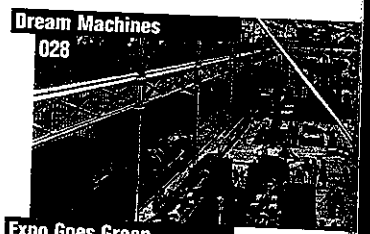

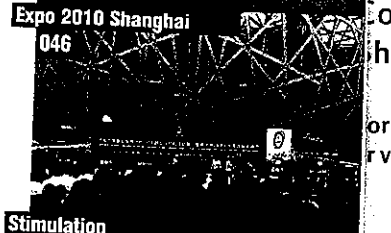

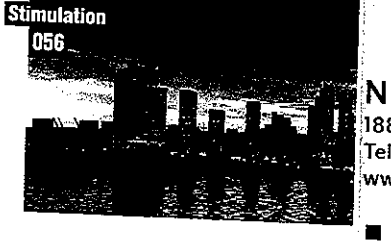

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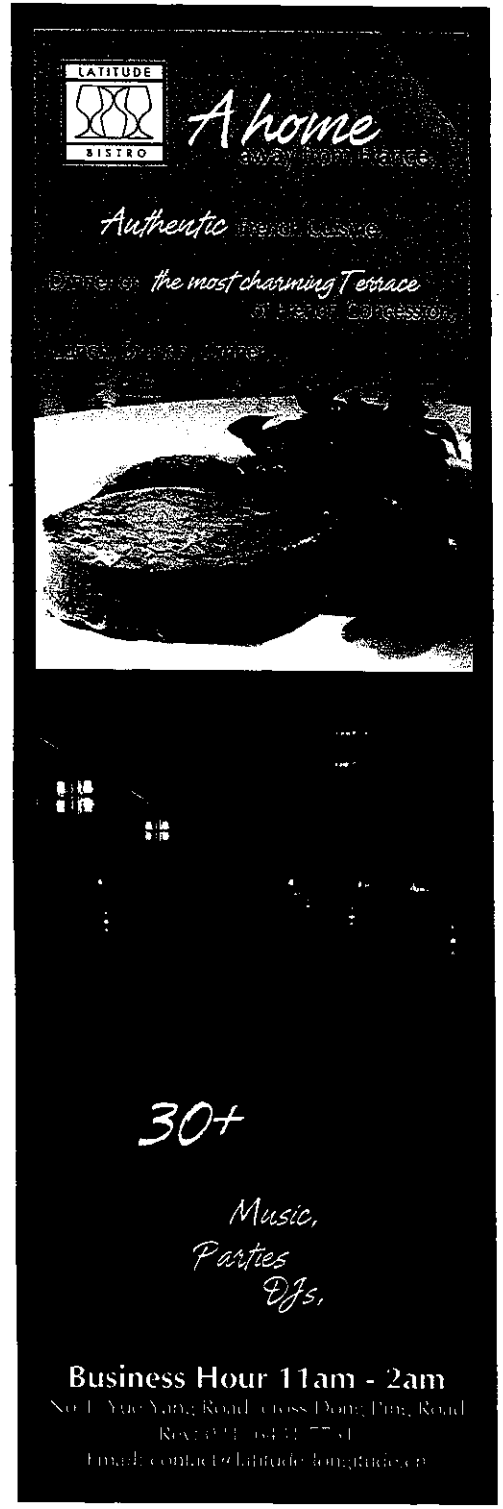

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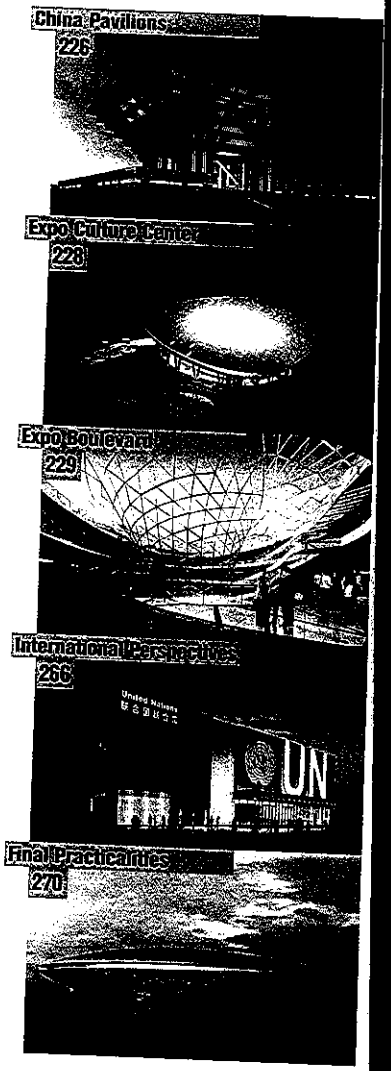

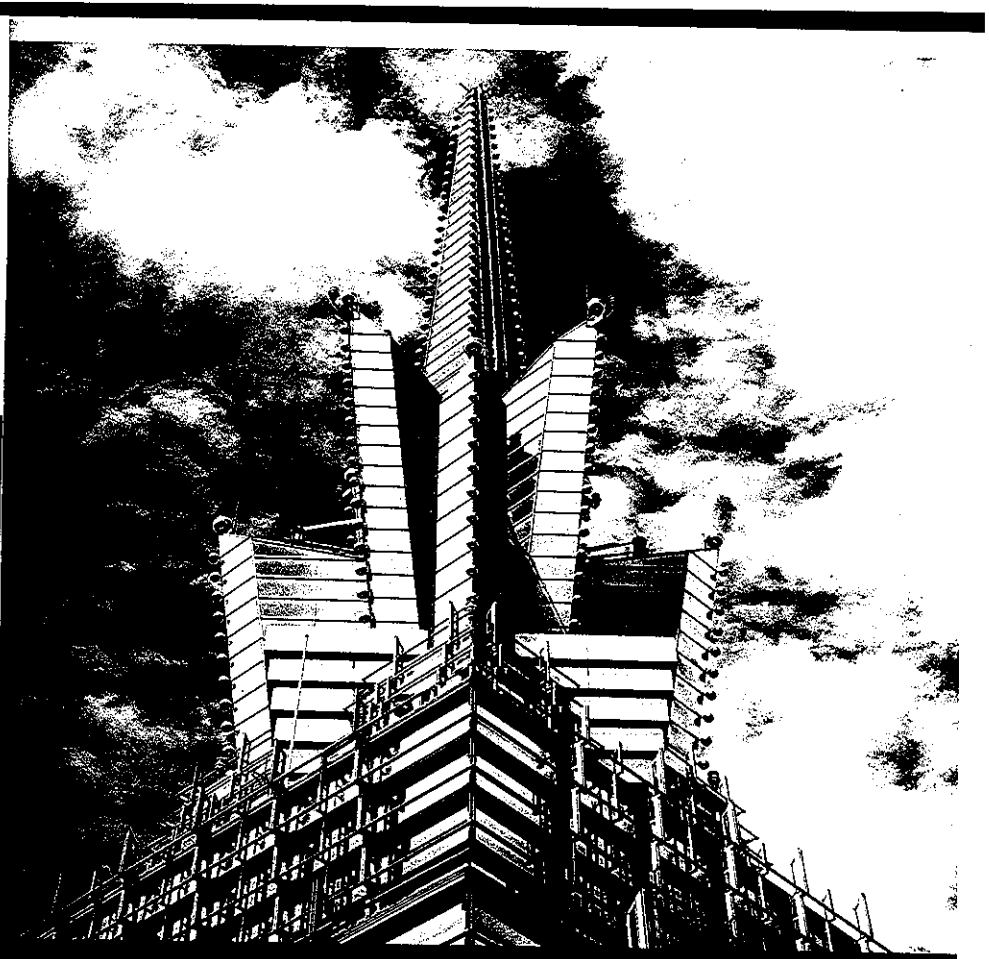

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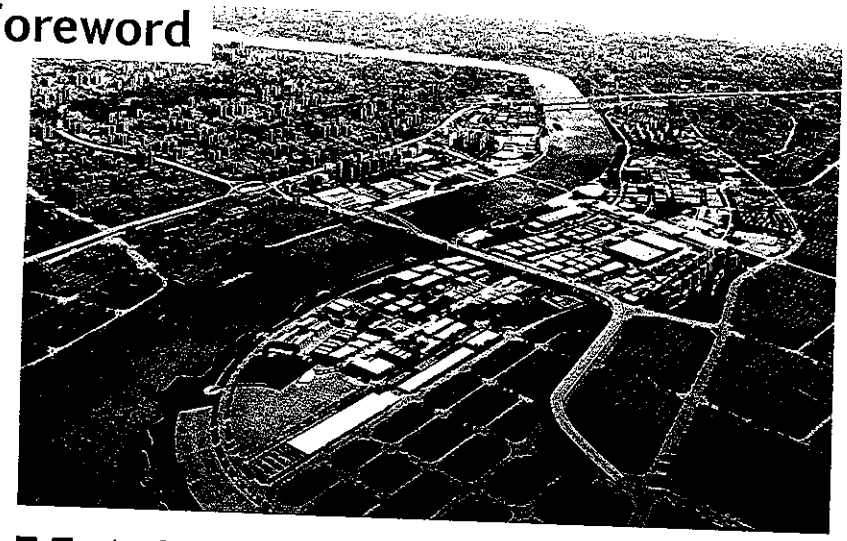
Foreword



Modern Shanghai and the World Expo were born within a single decade, over 150 years ago. Since then, the twin histories of the world's most iconic modern city and the greatest festival of modern civilization have unfolded in parallel, with frequent cross-fertilizations, through dizzy ascents and calamitous plunges that tracked the rise, fall, and renaissance of the modernist spirit. Through all these vicissitudes, each has reflected in large measure the trials, tempests, and triumphs of worldwide industrial modernity, defining its promise, nourishing its achievements, and sharing in its setbacks. At World Expo 2010 Shanghai, these parallel tracks melt together, into the largest discrete event in world history.

World Expo tends naturally to stupendous scale, but never like this. Expo 2010 is by far the largest ever staged, in almost every conceivable respect. It has far more participants and visitors than any Expo has attracted before, drawn to the most expansive site, enveloped by the most enormous urban development process the world has ever seen. It takes place in the largest city in the world's most populous country. It is not only the first China Expo, but also the first Expo in the developing world, the first officially sanctioned megacity Expo, the first to replicate itself in Cyberspace, and the first Expo to take the city as its explicit theme.

The significance of World Expo 2010 exceeds even its scale. For the world, it is a re-affirmation of the future in troubled times, for China it is the culmination of a 30-year process of opening and re-integrating with the world, and for Shanghai it is a threshold in urban evolution that reaches back into the essence of the city's cosmopolitan identity. For the institution of the World Expo, it is nothing less than a revolution, in the classical sense: a full circle that returns it to the vigor of its youth, when 'industrial civilization' and 'developing societies' were conceptually interchangeable terms. To make sense of all the shattered records, rejuvenation is the key.

World Expo 2010 Shanghai is a spectacular celebration, and an entertainment, but it recollects the deepest and most ancient wisdom that modernity can ever comprehend: You haven't seen anything yet. ✖

– Urbanatomy, April 2010

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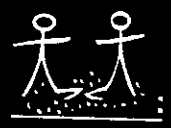

The Naxi people's pictographic glyph meaning "meet," where friends, family and communities come tog

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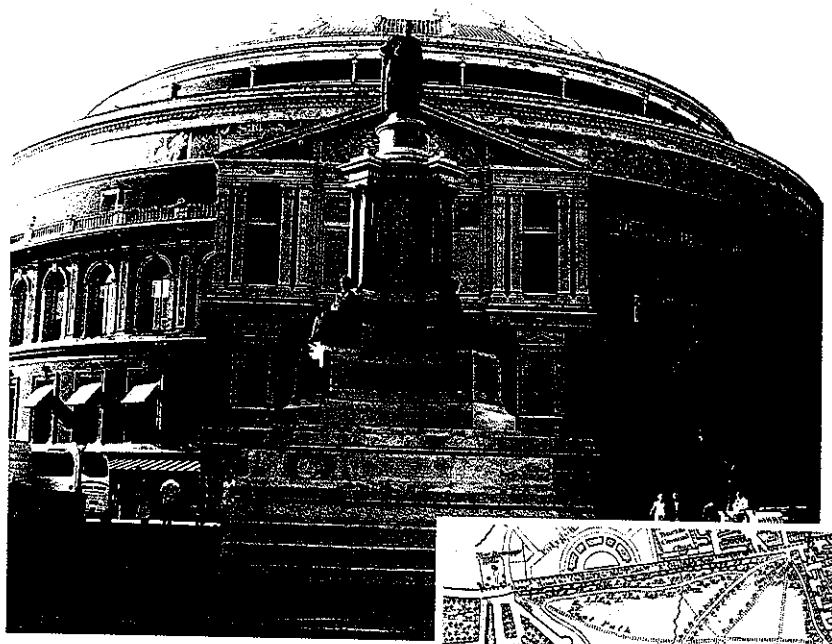
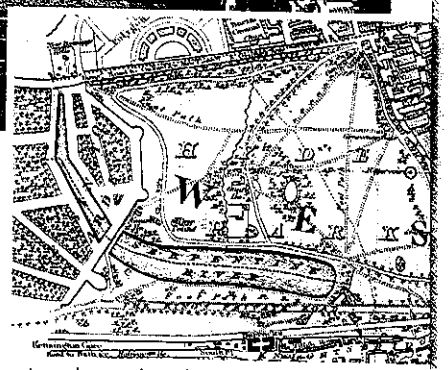
THE WORLD EXPO





Industry is work, and modernization is inevitably an arduous process. Yet the giant World Fairs or Universal Expositions that have celebrated the material progress of mankind for over 150 years show that the practical improvement of the human condition is also a suitable subject for spectacular festivities. History can certainly be related as a tale of grim struggle against inertia and calamity, but it is equally an epic of advancement and learning, in which the opening of new vistas compensates abundantly for the efforts made. Such is the spirit of the World Expo, which has sought to invigorate historical momentum by concentrating, displaying, and disseminating the international bounty of trade, technology and co-operative problem-solving, ever since its birth in London's Great Exhibition of 1851 (see p.80).

In terms of their international public prominence, World Expos are usually ranked third, behind the Olympic Games and the FIFA World Cup (see p.19). Yet the Expo's depth of tradition, six-month duration, and comparative seriousness of purpose mean that its has never surrendered its pre-eminent position when measured by long-term economic and cultural impact.

While never devoid of competition or mass entertainment, the World Expo has always expressed a variety of profound and consequential concepts. These include a broad historical vision, rooted in an unwavering commitment to material progress

Olympian Competition

Although the World Expo today ranks third among international spectacular events, after the Olympic Games and the FIFA World Cup, its relegation to the bronze-medal category is a recent one. Concerted national efforts to revive the classical Olympic Games took place in both the politically revolutionary France of the late-18th century and the economically revolutionary England of the mid-19th century, but the international Olympic movement only dates back to 1894, when Baron Pierre de Coubertin founded the International Olympic Committee (IOC). The first modern games were held two years later, in Athens, with just 241 participants from 14 nations competing in nine sporting disciplines: athletics, cycling, fencing, gymnastics, shooting, swimming, tennis, weightlifting, and wrestling.

Greece sought to restore its ancient status as the permanent home of the games, but the IOC had determined to model the modern Olympics upon the World Expo, as a fully international, itinerating event. For that reason it was decided to hold the second Olympics in Paris, the undisputed Expo capital of the age, to coincide in space and time with the great World Fair of 1900. The third Olympics was also staged as an auxiliary spectacle to a World Fair, the St. Louis Expo of 1904. The fair completely overshadowed the games, on both occasions, to such an extent that the future of the Olympic revival was considered uncertain. Eight decades later the situation had completely reversed. The 1984 Louisiana World Exposition, coinciding with the Los Angeles Summer Olympics of that year, was the first (and so far only) Expo to declare bankruptcy during its run. It was also the last Expo to be hosted in the USA.

The Olympic leap to spectacular gold was powered by the broadcast medium of television, which began locally at the 1936 Berlin Olympics and internationally at the 1956 Winter Olympics, held in Cortina d'Ampezzo, Italy. Cold War rivalries stimulated the spirit of competition, binding the IOC, broadcasting networks, advertisers and mass audiences into a spiral of rapidly escalating growth. The Olympics' global TV audience reached 600 million for the 1968 Mexico City Games and 3.5 billion for the 1992 Barcelona Games. A staggering 4.7 billion – roughly three-quarters of the entire world population – witnessed some 2008 Beijing Olympics TV coverage, which was supplemented for the first time by extensive online streaming video (2,200 hours by US broadcast giant NBC alone).

The Fédération Internationale de Football Association (FIFA) was founded in 1904, but it was not until 1930 that the first World Cup event was successfully held (in Uruguay), following a failed experiment in Switzerland, 24 years earlier. Like the Olympic Games, the evolution of the FIFA World Cup has been tightly interwoven with the history of television, reaching audiences of over 700 million by the early 21st century.

The 19th FIFA World Cup is being held during the Shanghai World Expo period, from 11 June to 11 July 2010, in South Africa, the first time it has been hosted by an African nation. Whatever the state of competition on the football field, the contest for attention between these two international spectacles, in an age of both revolutionary media and tectonic shifts in the order of the world, has clearly entered a new and unpredictable phase.

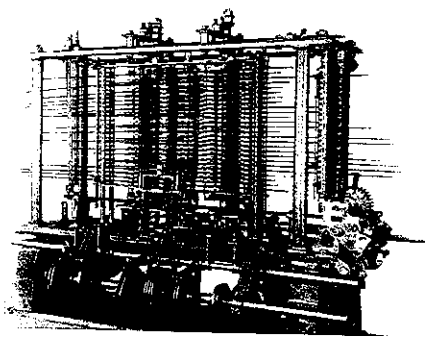
and the peaceful resolution of disputes, as well as more specific ideas stemming from technological, industrial, and – increasingly – public policy developments. The Expo provides a promotional platform, a discussion forum, and a laboratory, in which an enormous range of innovations, from consumer products to architectural designs and urban planning solutions, can be communicated, evaluated, and explored.

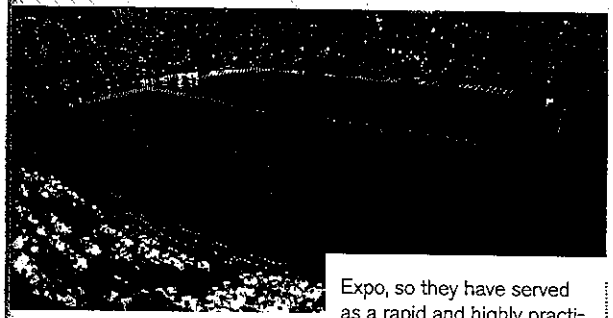
With the deepening of world economic integration, the Expo has become a crucial arena for commercial diplomacy, which has steadily supplanted the direct product promotion of earlier years (see pp.24-5). Nation states have accepted ever greater promotional responsibilities, as determined advocates working on behalf of their respective producers and service providers. Country-specific cultural features, cuisines, geographical attractions and industrial competences have become the objects of deliberate branding strategies borrowed from the world of business, with national Expo pavilions serving as display cases, media centers, and public relations hubs. Regional and metropolitan governments – especially those of Expo host cities and regions – have reinforced this trend, in order to advance local reputations and industries, stimulate tourism and encourage investment.

In 1928, at the Convention of Paris, the Expo was officially institutionalized at the international level for the first time with the founding of the Bureau of International Exhibitions, or BIE (see p.23). Since then, the development of the Expo has been entangled with the evolution of other international organizations, most importantly with the United Nations (established in 1945), whose agenda has been strongly echoed by the guiding Expo themes. Specific social and environmental goals precious to the UN have been grafted onto the core Expo ethos of peaceful economic development, directing the attention of Expo audiences to common problems, issues of global governance, and cross-cultural discussions about the nature of progress.

The BIE was designed to constrain and regulate an anarchic proliferation of world exhibitions, governed only by national authorities and lacking formal procedures for international coordination (see p.108). Its oversight extends to all international exhibitions lasting over three weeks, except for fine arts and trade shows. Since 1996 (when the 1988 Amendment to the Paris Convention came into effect), these events have been divided into two basic categories: World Expos, or International Registered Exhibitions, and International Expos, or International Recognized Exhibitions.

World Expos are the largest international exhibitions, inheriting the mantle of the historic Universal Expositions. They are held regularly every five years (on years divisible by five) and last for six months, with a universal theme, and unlimited size (by area). Their smaller cousins, the International Expos, are held between World Expos, last for three months, have a specialized theme, and are limited to a size of 25 hectares. World Expo participants usually build their own pavilions, whilst the organizer of an International Expo makes exhibition modules available to participants. According to a somewhat fuzzier criterion, World Expos are considered suitable for cities 'looking to





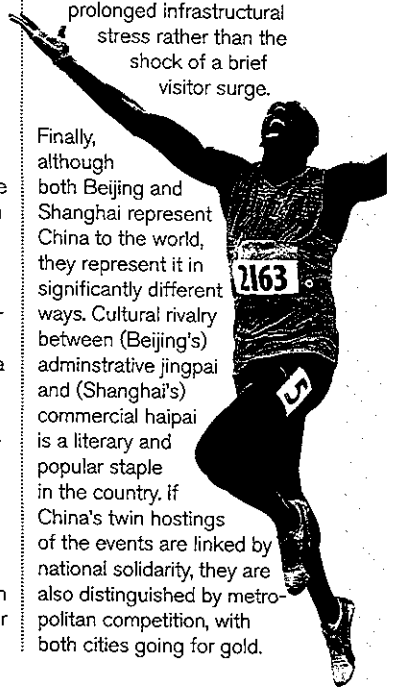
From Beijing to Shanghai

Historians looking back at the first decade of the 21st century are certain to recognize it as a moment of exceptional significance for China's global status, marked symbolically by the near back-to-back hosting of major international events in the country's political and commercial capitals. The 2008 Beijing Olympics brought China concentrated and positive international media attention on a scale it had never enjoyed before, providing the opportunity to exhibit its deeply-rooted talent for organized spectacle to a world audience, to express a contemporary spirit of openness, hospitality, and cosmopolitan sophistication, and also to present an integrated representation of continuous Chinese civilization that transcended Cold War fractures and suspicions. In all of these ways, it laid a public relations foundation for Shanghai's 2010 World Expo.

Preparations for the Beijing Olympics presented challenges that were in many respects comparable to those posed by the World Expo, so they have served as a rapid and highly practical process of education. Like the Expo, the Olympics demanded an image-focused urban overhaul of daunting scale, encompassing prestige architectural construction, environmental improvements, new transport infrastructure, security arrangements, social and cultural adaptation, and event branding. Iconic Olympic edifices were built (including the 'Bird's Nest' stadium and 'Water Cube'), the Beijing Metro system was doubled in size, a new terminal added to the city's airport, polluting industries were closed or relocated to distant outskirts, and a raft of policies introduced to reduce congestion and vehicle emissions. Image promotion of the five 2008 Olympic 'Fuwa' mascots with their 'One World, One Dream' anticipated the intense publicization of the 2010 Expo's Haibao and his promise of a 'Better City, Better Life'.

As with the Expo, the Olympics preparations were so vast and wide-ranging that economic accounting falters, but construction costs for the Olympic venues alone approached US$2 billion. Over 6.5 million visitors flocked to Beijing for the games, including over 380,000 from overseas.

While learning much from Beijing's Olympics, especially in regards to environmental policy, Shanghai also found itself in unknown territory due to important differences between the two events. Whereas the overwhelming preponderance of the Olympics audience watched the games on television, over a period of just 17 days, the Expo audience consists primarily of visitors and stretches over six months. Consequently, Expo visitor numbers are expected to exceed the Olympics total by a factor of at least 11. Expo preparations have to be oriented far more to tourism than to broadcast media image-making, whilst anticipating prolonged infrastructural stress rather than the shock of a brief visitor surge.



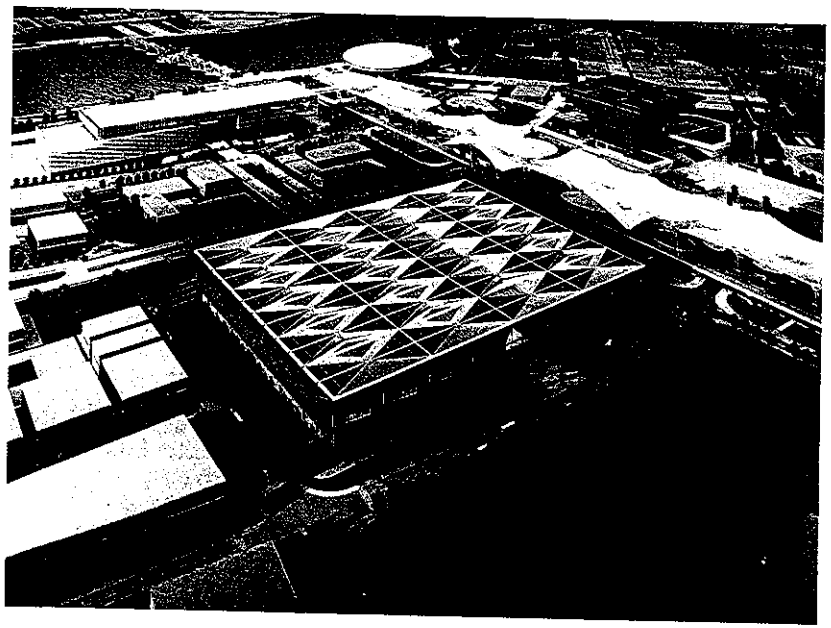
Finally, although both Beijing and Shanghai represent China to the world, they represent it in significantly different ways. Cultural rivalry between (Beijing's) adminstrative jingpai and (Shanghai's) commercial haipai is a literary and popular staple in the country. If China's twin hostings of the events are linked by national solidarity, they are also distinguished by metropolitan competition, with both cities going for gold.

accelerate projects of urban and economic renewal' whilst International Expos suit those 'looking to establish themselves in the international arena and to promote growth'. Both categories of exhibition welcome a similar range of participants, including countries, international organizations, civil societies, and business corporations.

World Expo themes are extremely broad, and of universal humanistic relevance. Increasingly, this theme is carefully coordinated with important international organizations, especially the United Nations. Participants at every level, from nation states to private corporations, are expected to respect the theme and accept it as a guideline for their specific presentations, ensuring the conceptual and educational coherence of the event as a whole.

Although World Expo participants are usually expected to design and build their own pavilions, exceptions are made for developing nations whose participation might otherwise be inhibited by the substantial investment requirements (running to tens of millions of US dollars for a typical national pavilion). Poorer countries can be offered pre-fabricated buildings provided by the organizer, or joint pavilions that group them by geographical region.

World Expos are immense undertakings, occupying dedicated sites several square kilometers in size, drawing tens of millions of visitors, and absorbing total investments in the multibillion (US) dollar range. Expo host cities are changed forever by their infrastructural and cultural impacts, which encompass large-scale redevelopment projects, new transport systems, and profound (if comparatively intangible) transformations of international connectedness and self-image. World Expos are truly historic events, within which the perplexities of development and of human progress find a particular, indelible expression, linked indissociably with a date and a city. In 2010, Shanghai gets its turn. ✖



The BIE

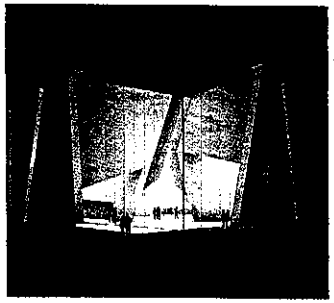
The Bureau International des Expositions, or Bureau of International Expositions (BIE), is the international and intergovernmental organization responsible for the regulation of World Exhibitions. It was established by the Paris Convention of 1928, on November 22 of that year, with France as its Depositary Power, and became operational in 1931. The official language of the BIE is French, with English as an additional working language.

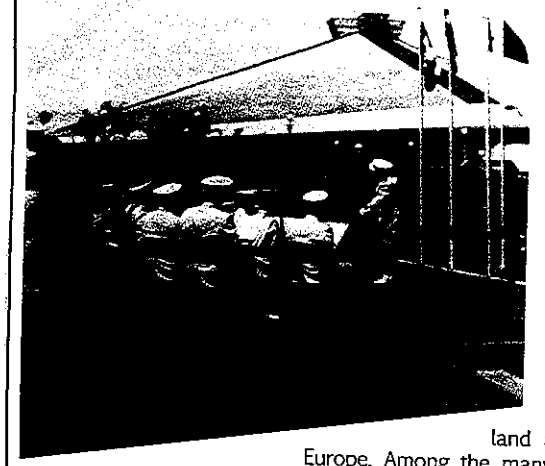
Amendments to the Convention, specifically regulating exhibition frequency, were added in 1948 and 1966. A thorough revision was completed and agreed in 1972. The latest Amendment, settling the regularity of World Expos, was agreed in 1995 and became effective in 1998. Today, over 150 states have formally subscribed to the Convention and 98 are members of the BIE, but neither step is a necessary precondition for representation at a BIE Exposition.

The principal responsibilities of the BIE are to oversee the calendar of exhibitions, the selection of host cities and the organization of events, as well as to facilitate effective collaboration between Expo hosts and participants. In addition to its administrative and regulatory duties, the BIE plays a wider supportive role, contributing organizational expertise, promotional assistance, and coordination with other international bodies. It also maintains a specialized library that serves as an archive and research resource. Through World Expositions, the BIE pursues a number of declared goals: to reinforce international relations; share culture and education; encourage development; work for the environment; renew the city; and experiment with the future.

To register an Exhibition at the BIE a strict procedure must be followed. The government of the country in which the host city is located first deposits an application at the BIE. The project is then examined by a BIE enquiry mission, and if found acceptable an international campaign in support of the candidacy is led by the country concerned. The competition among candidates for any given Expo is decided by election, through a secret vote by all BIE member-states at the BIE. The winning project is then registered as an Exhibition under BIE auspices. Preparation for the exhibition involves organization, invitation of participants, designation of Commissioner-Generals and approval of any special regulations. In the case of a Universal Exhibition, the event itself lasts for six months, attended by many millions of visitors and often making a reverberating impact upon world history. Part of this impact is determined by the post-exhibition efforts of the host country expo organization in coordination with the BIE, designed to ensure the optimum conservation of the event's cultural and architectural legacies.

The BIE headquarters is located in Paris, France, at 34 Avenue d'Iéna, 75016. Its website (in French and English) can be found at www.bie-paris.org.





Exponomics

A belief in the practical possibility of a better life has been something close to an underlying axiom of the World Expo since its beginning, yet this resilient optimism has often found itself in tension with the condition of the times. The world's first Universal Exposition, the Great Exhibition of 1851, followed upon years of hardship so pronounced they are still remembered as 'the hungry forties', a period of social misfortune and unrest that gestated chartist agitation in England and the 1848 revolutions in Continental Europe. Among the many other Expos to take place against social backdrops ravaged by severe economic agonies were two highly succesful US world fairs, those of 1893 (Chicago) held during the hungry '90s and of 1939-40 (New York) in the wake of the Great Depression. The global financial crisis brooding off-stage at the 2010 Expo, therefore, places this event in a long and even admirable tradition.

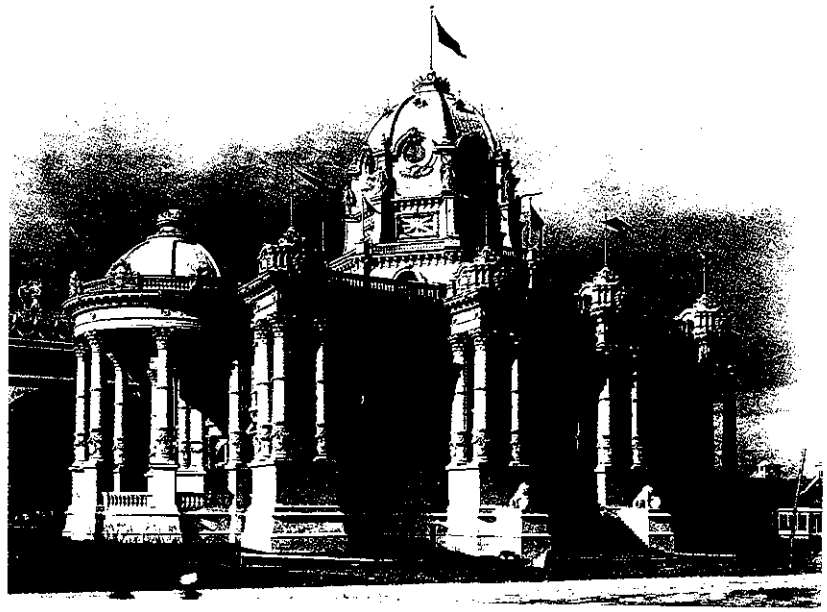
The planners of the 1851 Great Exhibition were dominated by the world's most energetic free trade lobby, crucially supported by the event's principal sponsor, Prince Albert. They envisaged the World Fair as a promotional platform for open international markets, conceived as the fundamental long-term remedy for economic stagnation. While this economic philosophy has lost much of its youthful zeal over the course of the ensuing 150 years, it has also become increasingly mainstream, internationalized, and reinforced by global institutions (most importantly the WTO). The ideal of trade promotion has been incorporated so thoroughly into the DNA of the Expo that it often eludes explicit comment, and commercial opportunities remain a central concern for most Expo participants. The free traders of the 19th century would probably be encouraged to learn that the Expo still provides significant and broadly uncontroversial support for international commerce and the world's common economic prospects.

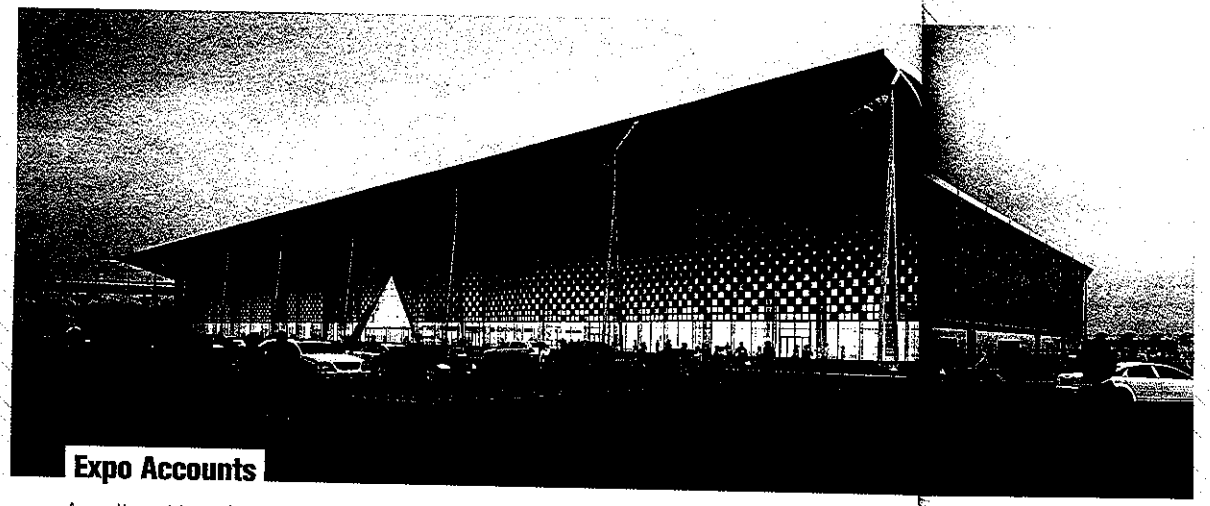
Industrial mass-production drives the expansion of markets, whilst trade accelerates technological inventiveness. Within this spiral, specific 'commercial' and 'technological' factors are difficult to isolate. Unsurprisingly, the Expo's contribution to economic vitality has included a large, and even predominating role as a catalyst for technological development, as a clearing-house for new ideas and techniques, a testing-ground for innovative systems and infrastructure, and a platform for visionary articulations of emerging realities (from mechanization, through electrification, to robotics, and beyond). The industries of tomorrow have always enjoyed a place of honor at the great Expos, whilst contributing immensely to the enduring historical significance of the event.

Modernity tends intrinsically to acceleration, with the Expo both contributing to, and challenged by, this trend. As high-frequency business and technological communications have progressively outstripped the Expo's five-year cycle, the event has been forced to adapt by modifying its role. In an age of frictionless worldwide messaging and real-time information, the Expo has downgraded the importance of

specific products and inventions, making way for more general, thematic and visionary exhibitions, devoted to the resilient qualities of nations, industries and companies, to long-term problems and opportunities, and to broadly-based evolutionary processes that will shape the world for many years to come. Its original function as something close to an advertising medium has, by necessity, gradually given way to a deeper educational purpose. Widgets that might once have been exhibited as wonders in themselves now serve to illustrate the capabilities of widget-making regions and industries, within elaborately constructed narratives that explain how such widgets came to be made, why they matter and what they may become.

Besides its roles of advocacy (for commercial openness) and of business promotion (for increasingly generic product categories), the Expo also involves massive expenditures that are difficult to precisely calculate, but which combine the features of cost, investment, and economic stimulus. From the perspective of their organizers, this aspect of World Expo economics is daunting. Historically, two-thirds of World Expos have lost money, with organizers facing bankruptcy on numerous occasions. Shanghai's World Expo 2010 has been the most expensive of all time, with direct costs incurred in the construction and operation of the Expo site exceeding US$4 billion, and overall Expo-related expenditure in Shanghai alone estimated at roughly ten times this figure. Yet the returns on this lavish investment are no less remarkable: the greatest show on earth, a substantially rebuilt city, and a jolt of economic adrenaline during unusually difficult times. ✖





Expo Accounts

Any attempt to make a full economic account of an event as large and widely ramified as a World Expo is unlikely to be entirely convincing. The scope of 'Expo-related' expenditure is inevitably impressionistic, whilst many of the economic benefits – from infrastructural improvements, to image building and diffuse stimulus – elude precise quantification. Quite clearly, however, both sides of the economic ledger have crossed historic thresholds at Shanghai's World Expo 2010.

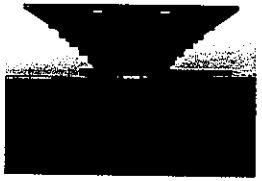
Accounted narrowly, the Shanghai Expo budget amounts to RMB28.6 billion (US$4.2 billion). This includes RMB 18 billion of invesment in construction of the Expo site and a further RMB 10.6 billion to cover running costs over the six-month Expo period. Included in the operating costs is US$100 million in Shanghai government financial assistance to support the participation of poorer countries. Revenues come from three main sources: ticket sales, sponsorship funding, and Expo construction bonds. Ticket income is expected to exceed RMB 6 billion, and RMB 8 billion of Expo bonds have been sold across China. In the longer term, the most important economic asset is expected to be the Expo site itself together with surrounding improved real estate, available for the municipal government to lease-out lucratively after the event. The ultimate financial balance is expected to be positive, with profits directed to affordable residential construction in the area of the Expo site.

Accelerated infrastructure development in Shanghai, scheduled to meet the Expo timetable, encompasses total investments exceeding RMB 250 billion. In a little over a year, the city has doubled the size of its Metro system (to 420 kilometers of lines), built a massive multimodal transport hub in Hongqiao, radically reconstructed and renovated its historic Bund area, added new bridges, tunnels, elevated pedestrian walkways, and parks, refurbished its heritage sites, resurfaced roads, and repaved hundreds of kilometers of sidewalks. No other city anywhere in the world, seeking stimulating 'shovel-ready' projects to counter the recessionary climate of 2009, has been as inundated by opportunities – or as determined to seize them – as pre-Expo Shanghai.

For the city, the Expo's economic costs and benefits extend to many other, comparatively vague or intangible aspects of the event, from general urban development and the vitality of private businesses, to immediate (and also longer term) tourism promotion (see p.27), image-building, intellectual exchange and commercial networking on an unprecedented scale. A special index on the Shanghai stock exchange tracks 55 'Expo-concept' sector stocks, listing the hotel, aviation, retail, catering and transportation companies expected to benefit disproportionately from RMB 100 billion of direct Expo-related consumption (including over RMB 5 billion in Expo-themed jewelry sales alone). Yet Shanghai is only one among myriads of economic agents investing in the Expo. The majority of participants, whether foreign nations, international companies, or Chinese provinces, have their own commercial agendas and complex calculations to make, weighing multimillion dollar investments in pavilions and exhibitions against enticing trade and tourism opportunities. Whilst cultural and diplomatic contacts are doubtless valued in their own right, World Expo traditions of economic practicality and commercial enthusiasm have shown no sign of withering in 2010.

Build It And They Will Come

Increased prosperity and openness has led to sustained growth in China's travel industry, and the World Expo is almost certain to reinforce the trend. The country's tourism authorities anticipate overall revenue growth of 12% and 500,000 new tourism-related jobs in 2010, supported by 2.15 billion domestic trips (worth RMB 1.15 trillion) and 132 million overseas visitors

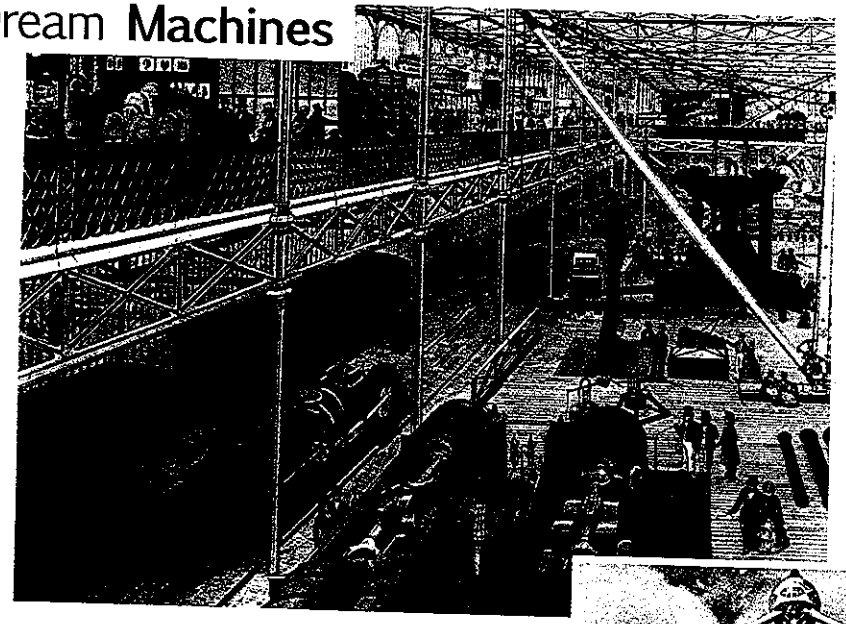


(worth RMB 290 billion). Over 50 million Chinese tourists are expected to travel abroad.

According to official estimates, at least 50 million domestic visitors will travel to Shanghai to experience the Expo, along with 3.5 million visitors from overseas. To tempt these visitors into explorations beyond the Expo site, the Shanghai Tourism Administration has drawn upon the suggestions of local residents to compile a list of the city's top scenic spots, taking in its metropolitan core areas on both sides of the Huangpu, shikumen architectural heritage and classical Yu Garden, as well as the outlying attractions of Sheshan, Fengjing Town and Dianshan Lake. Over 300 sites are recommended in total. Visitors seeking a respite from Expo and big city glitz have the opportunity of spending time with local families living in the city's rural outskirts, who have cooperated with the Administration and tour agencies to offer 'suburban life experience' packages, enabling visitors to learn about rustic traditions of cuisine, art and play.

The Shanghai Tourism Administration has even introduced its own electronic money system, in the form of a pre-paid Shanghai Tour Cards, to facilitate tourist consumption. Supported by more than 30 local and international banks that are part of the China UnionPay network, the card is designed to make expenditure frictionless, whilst entitling users to discounts at a range of tourist destinations. It can be purchased at China Post and China Telecom outlets and recharged at 7,000 points throughout the city .

Dream **Machines**



The World Expo has undergone remarkable quantitative and qualitative changes over the course of 160 years, but its role as a showcase for technological innovation has been a constant and central feature. Whilst specially-crafted themes have guided the agenda of recent Expos, these have augmented, rather than substituted for a consistent, implicit and essential theme that has guided the event since its inception: the core commitment to material progress, represented primarily by technological innovation. Propelled by the surging currents of perpetual industrial revolution, Expo has nourished a speculative, futuristic intelligence that feeds back productively into technological evolution as a stimulus, research guideline and investment prompt.

In particular, the long transition from the steam age to that of electricity was both reflected and accelerated through the major expos of the late 19th century, which showcased the application of electrical power to mass transit, public lighting, consumer products, computational devices and communication systems. The Electricity Pavilion of the 1893 Chicago World Expo provided an arena for the epic contest between Edison and Tesla over the future course of the electrical technology, at the decisive forking of development paths between direct and alternating current (see p.98).

The World Expo is a creature of industrial civilization, in which technological and economic processes are combined as an indissoluble system. During the early stages of the industrial revolution, mechanization applied primarily to capital goods (productive machinery), with steam engines employed to pump water from mines and later to drive factory equipment. Its basic function was to raise manufacturing efficiency, of goods that were not themselves highly technological, such as the textile items produced by the mills of late 18th century England. Steam transportation also began as a capital asset, easing bulk transportation of raw materials and other industrial inputs, but its rapid extention to passenger transportation ushered in a crucial transition by providing services that were new – or at least radically improved – and thus extending technological innovation to the mass consumer market.

Electrification radically intensified this trend. Its reworking of the capital goods sector occurred broadly in parallel with its intrusion into the world of consumption, through public lighting, and new communications systems beginning with the electric telegraph (at first piggy-backing on the existing railroad network). By the early 20th century these electrical infrastructures were being complemented by mass-market high-technology products, first domestic lighting and telephones, then radios, television sets, white goods (electrical household appliances) and music systems, of the kinds that dazzled visitors to the 1939-40 New York Expo.

By the early 1980s the appearance of the personal computer was further eroding the distinction between 'productive' and 'consumer' technology. Since every computer worked by emulating a 'Universal Turing Machine', the difference in principle between industrial and domestic technology had ceased to exist. In addition, the progressive digitization of money and computerization of finance further scambled the blurry boundaries separating technological and economic spheres, whilst models of decentralized trial-and-error problem-solving based on the functioning of markets began to be adopted by software engineers. Machines and economies became increasingly indistinguishable. As both end-products and critical factors of production, computers thus closed an entire economic circuit. More and better computers meant more and better computer manufacture, in a self-amplifying spiral that set the pattern for the entire industrial economy.

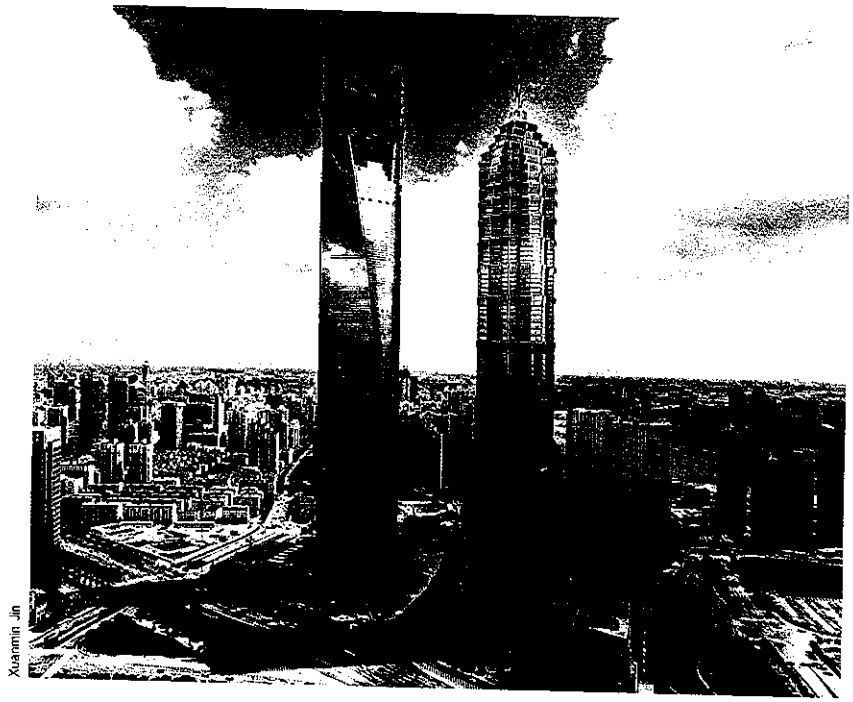
Charles Babbage's Analytical Engine, the mechanical prototype of the digital computer, was first publicly exhibited at the London Expo of 1862. By the New York Expo of 1939-40, the first electric calculator was on exhibit. Yet the tight entanglement between the Expo and the frontier of electrification that had lasted into the mid-20th century was not sustained into the age of electronics. Three principal factors disrupted the relationship. Firstly, as a WWII technology (meeting military demands for high-speed ballistic and cryptographic calculation), the emergence of the electronic digital computer coincided with a general crisis of modernity that deeply injured the status of the Expo as a promotional platform (see pp.106-7). Secondly, the radical acceleration of technological development initiated by computerization meant that development cycles could no longer be adequately processed by an event occurring only twice each decade. Thirdly, the simulated spaces propagated by computers tended to collapse and degrade geography, at least imaginitively, threatening to replace physically instantiated events with virtual environments, incarnated solely in Cyberspace. "Travel was a meat-thing," says William Gibson's hacker antihero Case, dismissively.

The World Expo had not adjusted well to the age of television (see pp.120-1), and as the computer revolution generated domestic media systems of ever-increasing resolution and sophistication, it seemed to be following a trajectory that was extremely ominous for cinemas, public performances, and theme parks, as well as international fairs. Yet the twists and turns of more recent technological evolution are not necessarily supportive of the pessimistic forecasts favored by Expo doomsters.

Although the World Expo only dimly reflected the late-20th century ascent of the personal computer and the birth of the Internet, the early-21st century technosphere presents a different landscape and new opportunities.

By the end of the last century, decades of continuous advance in miniaturization and mass-production had carried electronics into unchartered territory. Computers of far greater power than the giant mainframes of the mid-20th century had become so cheap, tiny and abundant that they could be implanted (often invisibly) into myriads of consumer items, from cars and washing machines to cameras and toys. Most consequentially, they invaded mobile phones and other portable devices, becoming a constant, invisible companion, and taking on a new pedestrian existence (liberated from household installation). Even as virtual spaces continued to proliferate and elaborate, therefore, another, quite distinct relation between electronics and space was emerging, captured by the expression 'ambient computing'. Computers were now everywhere, or potentially everywhere. Advanced metropolitan areas, in particular, found themselves transformed by technologies such as Wi-Fi Internet, GPS, touch screen interfaces, and RFID, which lifted computerized media out of the domestic living room, for distribution throughout public space.

The leading edge of technological development had reconnected itself to the 'city of the future' and thus to the natural topic of the World Expo. Once again, the Expos special competence – concretely realizing a microcosmic version of the urban world to come – had been restored to indisputable relevance. The World Expo was uniquely positioned to unveil the interactive, intelligence-saturated, immersive multimedia urban environment that emerging technologies implied. ✱



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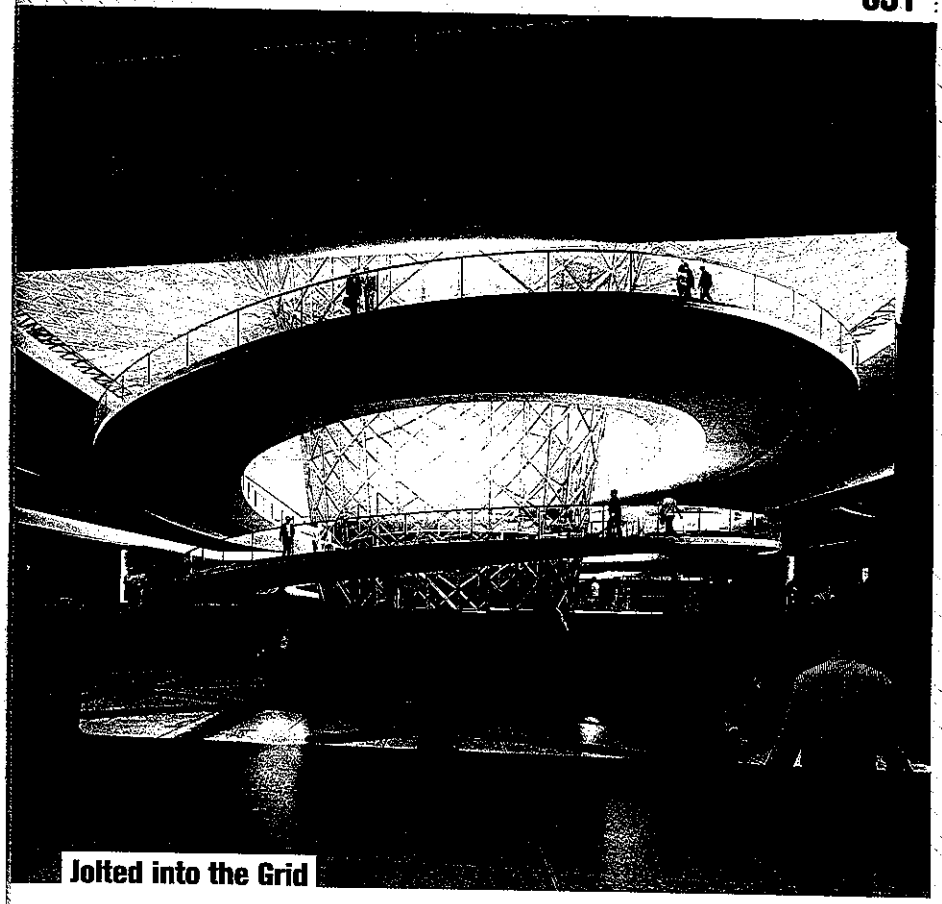
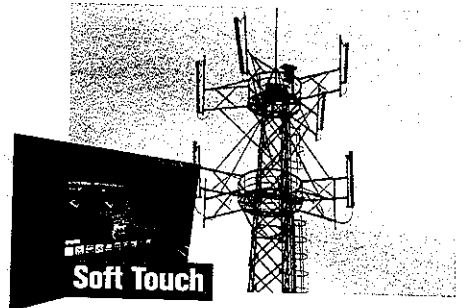


Jolted into the Grid

In order to understand the special Expo contribution to the tide of electrification it is important to recognize the particular problems confronting network innovations. New technological infrastructures based upon a grid cannot easily be introduced piecemeal, since they require a systemic transition for their economic viability. For instance, electrical goods cannot be sold until an electrical grid is already in place, yet the absence of mass markets for such goods undermines the demand for electrical infrastructure. It is in this context that the value of the World Expo stands out most clearly. As a miniature city in itself, constructed on a futuristic model, the Expo site was able to demonstrate not only the virtues of specific consumer items, but of entire technological networks. During the French and American Expos of the late 1880s and '90s, visitors were able to wander through an electrified environment, comprehensively illuminated and powered by the latest energy technology. The electrical future was made palpable, setting a pattern for the world.

The age of networks has certainly not passed. In certain respects it has scarcely begun. With new power, communications and intelligence networks striving towards existence, the midwifing role of the Expo remains as vital as ever, and in 2010 its relevance to tomorrow's energy (see p.273) and information (see p.270) infrastructures has been put clearly on display.



Soft Touch

Pioneering Shanghai advertising companies have been making the city more expressive and increasingly responsive since the early years of the new millennium, spreading LCD screens across the downtown urban surface and into the city's taxis. Originally operating as one-way channels for commercial messages, these interfaces are developing into a flexible infrastructure for interactive communication.

TouchMedia's devices, mounted behind the front passenger seat of Shanghai taxis since 2003, have evolved into touch-screen systems that enable passengers to navigate through advertising videos. It has been further enhanced for Expo, adding information resources for visitors and 3G Wi-Fi capabilities for downloads onto mobile phones. Local transport authorities, impressed by the potential benefit to visitors, have minimized regulatory obstacles. The TouchMedia network, which extends to Beijing and Guangzhou, reaped advertising revenue of RMB 100 million in 2008.

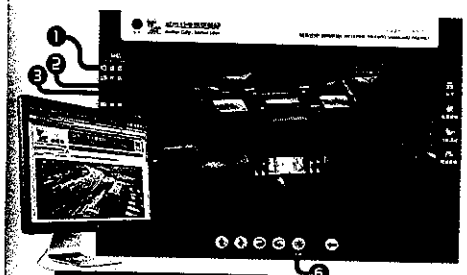
Focus Media, whose TV-sized screens can be seen in high-traffic pedestrian areas throughout the city, is also developing in the direction of interactivity. It is cooperating with Chinese web portal Sina.com to explore ways to integrate its screens with Internet technology, explore new formats, and respond to feedback from viewers.

The most spectacular examples of the genre are the giant outdoor screens installed by Tulip Mega Media. On the Lujiazui-side of the Huangpu, across from the Bund, Tulip has transformed entire skyscrapers into programmable display surfaces, frequently illuminated by highrise Haibaos.

Shanghai Robot

Spearheading the robot invasion at the 2010 Expo is Shanghai Yingsi Software Technical Company. The company has developed a variety of musical and martial arts androids (and gyndroids) for the event, confidently expecting visitors to be astounded by the grace, communicative powers and agility of its machines. Yet Yingsi's primary research drive is directed to virtual robots: functional Internet-based artificial intelligences that respond to queries, converse, and quarry for information. It's web-bot Dr. Haibao, based on a prototype called 'little i' that has already participated in over 22 million Internet discussions since going online in 2003, is designed to offer practical assistance to visitors seeking travel or events program information, directions, weather reports, or other Expo-related guidance.

The Institute of Robotics at Shanghai's Jiaotong University has concentrated its attention on the physical utility of intelligent machines, developing robotic wheelchairs for the Expo with an eye to future industrialized production. Its intelligent wheelchairs provide navigational and communicational assistance to their users, exploiting advanced capabilities in recognition, memory, speech synthesis and control. Users with different types and degrees of disability can command the wheelchairs through speech, sign language, or even brainwaves (via a special helmet interface).



Expo in Cyberspace

The World Expo has never worked well on TV (although efforts are being made to improve this situation in 2010), but the Internet has opened an entirely new mediascape, where the Expo's prospects look far more promising. In Cyberspace, everyone can see your dreams.

Expo Shanghai Online is one of the major innovations of the 2010 event, and the first virtual Expo in history. Developed by Crystal CG in combination with Tenscent (creators of the hugely popular Chinese Instant messaging application QQ), the Chinese version of the Expo simulation was officially launched in November 2009, with the English version following in December. It offers 3D navigation through the site and pavilions, nocturnal views, tour guidance, and an abundance of supporting information in rich, interactive multimedia. Over 350 exhibition spaces can be visited, with content regularly updated to keep pace with developments at the event, and even after the closure of the physical Expo, on October 31, 2010, the virtual Expo will remain open, functioning as a digital museum.

Chinese: www.expo.cn
English: en.expo.cn

The Internet of Things

Electronics still supports escapes into ever more fabulous virtual environments, but it is also coming down to earth as never before, scattering fragments of talkative artificial intelligence into mundane objects. World Expo 2010 reveals that alongside the Internet of artificial space, there is a rapidly emerging 'Internet of Things' (IoT) – populated by mobile phones, retail items, household appliances, medical devices, and myriads of other entities implanted with minuscule identification chips. As the IoT spreads, it coaxes the world into becoming an electronic communications network.

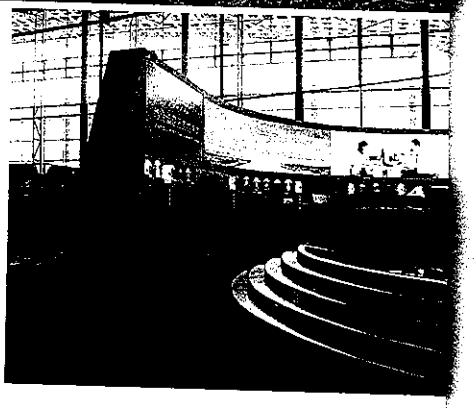
The enabling technology of the IoT is RFID (radio frequency identification), realized in cheap, tiny chips that are activated by the proximity of a reading device. Major uses of the technology include stock control and logistics management, purchase processing, robotic sorting, electronic payments, medical monitoring, luggage handling, and security clearance. It introduces a world of chatty, cooperative objects that identify themselves, describe their characteristics, remember interactions, protest misuse and misplacement, announce problems, and suggest appropriate treatment. The precursor technology of scannable bar codes translates straightforwardly into the RFID-readable IoT, but rapidly advancing chips will provide vastly greater information densities at minimal cost, with increasingly intelligent functions.

The Chinese market for RFID applications is expected to surpass RMB 4 billion in 2010, with the Shanghai Expo site providing a test ground for innovative implementations of the IoT. In particular, the potential of mobile phones to function as IoT interfaces has been explored, exhibited, and put to use (see p.35), through the introduction of RFID SIM cards. Anybody with such an RFID-equipped phone can track the infiltration of the IoT into the Expo site for themselves, by swiping the objects distributed there to find out what talks back.

Mobile Generations

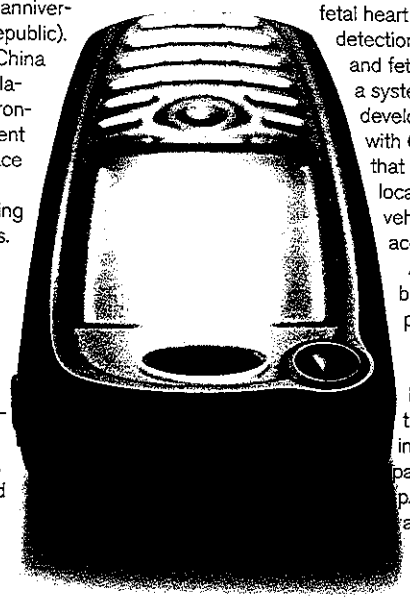
In an accelerating world economy, based upon massive investments in emerging industries whose potentialities stretch the imagination, it is natural that 'futurological' forecasting – and even wild speculation – has come to play an indispensable role in technological evolution. Real technological outcomes might still be surprising, yet patterns are sometimes retrospectively detectable even in the history of bad guesses and predictive failure. In a few cases, such patterns can support the projection of realistic trends.

One such pattern has been a consistent tendency to underestimate the market appetite for social and communicative functions in new technologies. The personal computer was conceived as an item of domestic consumption, without anticipating its role as a communication device, interconnected with social networks that consolidated as the Internet. The Internet itself was conceived as a military communications and scientific research tool, without expectation that its digital interchange protocols would fertilize a luxuriant jungle-growth of new 'social media', dominated by activities from blogging and file-swapping to chatting, tweeting and personal profiling (guided by 'social graphs' that describe networks of 'friends'). It seems that whenever consumers express their preferences for technological utility in the marketplace, connectivity rules.



Nothing exhibits this pattern more clearly than the explosive growth of mobile telephony, the exemplary connective technology, and (together with the Internet) the first revolutionary industry of the neomodern, 'globalized' world. Over the course of just three decades, mobiles have arisen from nowhere to become the most widespread electronic technology on earth, connecting well over half of the world's population, or 3.5 billion subscribers, with over a billion new handsets sold each year. In the final years of the 20th century, mobile telephony began melting together with the Internet, and today nearly a billion people access the net through their phone.

The existing frontier of the industry is the third generation (3G) telecommunications infrastructure required to support flexible, Internet-compatible and high-bandwidth services to the users of mobile wireless devices. China's north-eastern neighbors Japan and South Korea have been world leaders in 3G development, and China unveiled its own 3G infrastructure in early 2009 (to coincide with the 60th anniversary of the People's Republic). Uniquely in the world, China has established a regulatory and business environment for 3G development that maximizes the space for experimentation by simultaneously cultivating three distinct standards. The locally-developed TD-SCDMA (time division-synchronous code division multiple access) standard has been allotted to China Mobile, the world's largest telecoms company by subscriber numbers. The two remaining (and internationally prevailing) standards have been licensed to China Unicom (WCDMA) and China Telecom (CDMA-2000). The combined initial investment of all three companies in the technology is expected to exceed US$40 billion.



With Internet-connected multimedia and multifunctional mobile telephony set to be the defining technology of the 2010 Expo, China Mobile has taken the leap into the fourth generation. The company has installed a 4G network at the Expo site to demonstrate its futuristic TD-LTE (long term evolution) capabilities, built upon the foundation of its new TD-SCDMA standards and technology, but offering 20 times the bandwidth of even advanced 3G networks. LTE phones are able to handle high-definition video transmissions, large data downloads, and high-speed Internet access. China Mobile's 3G Expo innovations include a 'Mobile World Expo' platform, available for free download, that allows users to make a virtual tour of the event through their handsets.

China Telecom has brought a variety of specialized 3G phones to the Expo. These include its 'Maternity Consultant' designed for expectant mothers (complete with fetal heart monitoring, radiation detection, emergency hotlink and fetus-friendly music), and a system for automobiles, developed in collaboration with General Motors China, that provides for remote location and montoring of vehicles in case of crime, accidents or breakdowns.

Another emerging mobile phone technology prominently exhibited at the Expo is the 'swipe' capability delivered by RFID SIM cards, which transforms mobiles into keys, tickets and payment devices (see p.61). Both China Mobile and China Unicom have RFID systems on show, and in use, at the event.

Expo Goes **Green**

Over the course of the last half-century, the Expo's original and implicit themes of trade and technology promotion, international cooperation and cultural exchange, have been augmented, and modified, by the increasing prominence of environmentalism as a central Expo concern. 'Green' issues that were almost invisible at the Expo as recently as the 1960s have taken center stage at the event, recontextualizing economic debates, redirecting technological aspirations, and rewriting the agendas guiding intergovernmental and intercultural partnerships. The steady greening of Expo themes is an unmistakable trend. Since Expo 1970 in Osaka, participants have competed to outdo each other in public displays of devotion to the environmental cause.

Environmentalism has become something close to a meta-theme of the World Expo, because its preoccuptions fit naturally with the Expo's internationalism, with its universal perspective, and even with its relentless search for fresh technological and public policy challenges. As exemplary 'collective action problems' (demanding cooperative solutions), green quandaries can be expected to find a hospitable environment in a world gathering that is itself the outcome of a complex, institutionalized, multinational collaboration. The Expo's globalist universalism is echoed theoretically in James Lovelock's Gaia Hypothesis (which defined the entire terrestrial biosphere as a single and irreducible self-regulating unit), visually in the iconic 'Blue Marble' photograph of the Earth seen from outer space, and institutionally in the transnational orientation that typically characterizes green organizations.

Historically, the rise of environmentalism has coincided with a comparative decline in the prestige of the Expo, with green movements and Expo positioned antagonistically in respect to the fundamental desirability of industrial development. The World Expo had arisen as an explicit celebration of mechanization, consumption and growth, so its relationship with environmentalism was destined to difficulty

Solar Systems

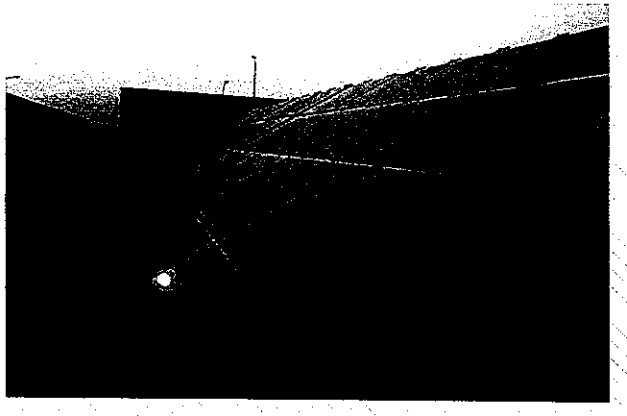
Fossil fuels are chemical stores for natural solar power, captured by vegetable photosynthesis and accumulated over eons in geological deposits. The essential idea of technological solar power, therefore, is an obvious one: tapping the sun directly as an energy source, rather than indirectly, through plants. The practical development of this idea is far less straightforward.

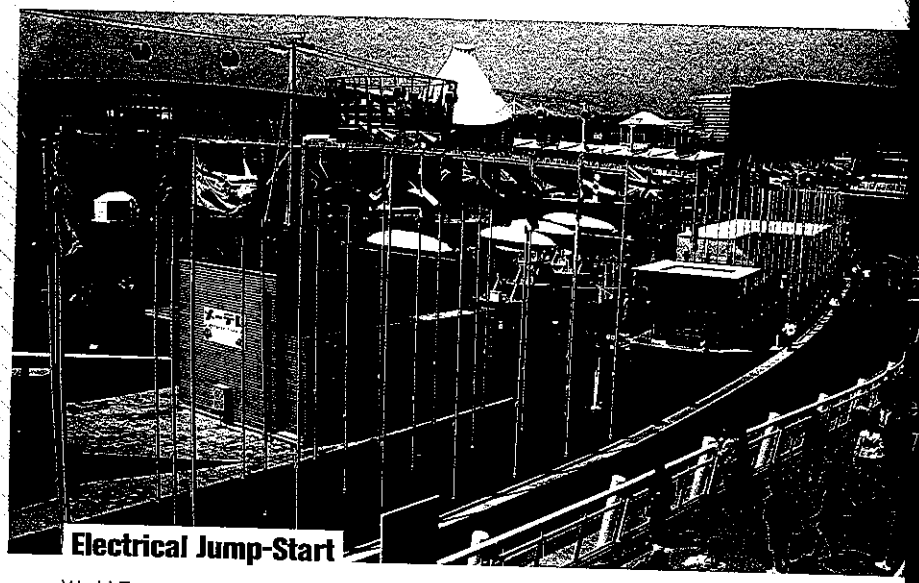
Sunlight can be concentrated, using mirrors, and exploited as a source of thermic energy. Concentrated Solar Power, which was already employed to create steam as early as 1866, remains a viable model for solar development and continues to advance, especially in the United States and Australia.

The mainstream of solar development is based on photovoltaic technology, which converts sunlight directly into electricity (rather than concentrated heat). The first photovoltaic device, or 'solar cell', was created in the 1880s (by Charles Fritts), but the efficiency of this selenium-based unit (at under 1%) was far too low for practical application. Silicon was employed as a substrate for photovoltaics in the 1950s, with efficiency reaching 6%. Technological and manufacturing advances steadily improved solar economics over the ensuing decades. The cost per watt fell by two-thirds from the mid-1950s to 1970, then a further 15-fold by the mid-1980s. Spiking oil prices in the early 1970s drove rapid development and application of the technology, but from the mid-1980s the pace slowed, due to an abundance of cheap oil. The high oil prices of the early 21st century, accelerated solar development once again, with worldwide photovoltaic power output doubling every two years. China has quickly emerged as a major force in the industry, with photovoltaic production that today ranks first (by volume) in the world (see pp.60-2).

Photovoltaic technology made its World Expo debut at Knoxville 1982, themed 'Energy turns the World'. The recent World Expos in Hanover (2000) and Aichi (2005) have also provided solar power with a prominent stage.

At Expo 2010, solar power has been more energetically exhibited than ever before, supported by large-scale demonstrative applications overseen by the Shanghai Solar Energy Research Center. Three of the four permanent Expo buildings, the China Pavilion, Theme Pavilion and Expo Center, are BIPV (Building Integrated Photovoltaic) structures, with integral solar roof paneling generating 4.5 to 4.6 megawatts. An alternative construction technique has been employed at a special solar pavilion based on the former Nanshi power plant, where unobtrusive solar cells have been built into the building's glass facade walls, generating 5.5 megawatts. Additional solar applications are distributed throughout the site, installed in newspaper kiosks, street lighting and advertising hoardings.





Electrical Jump-Start

World Expo is a unique opportunity to place sizable bets on emerging technologies, crafting an infectious sliver of the future. One of the clearest examples of this phenomenon at Expo 2010 concerns road transport, where a solid wager on electric solutions aims to take the haze out of the future.

China has been a world pioneer in the application of supercapacitor (or electrochemical double layer capacitor, EDLC) batteries to buses, attracted to the technology by the comparatively rapid recharge rates it offers. At the 2008 Beijing Olympics, where vehicle emissions posed a substantial environmental challenge, 50 supercapacitor lithium-ion electric buses were introduced to carry visitors to the games. The 2010 Shanghai Expo builds on this green initiative, developing a green transport program launched in the city in 2005. Under the Sunwin brand, a joint-venture between auto giant SAIC (see p.271) and Volvo, 500 supercapacitor buses have been supplied to transport visitors to, and around, the Expo site. The recharging infrastructure installed for the Expo buses will jump-start public road transport electrification in the city.

In addition to their green (zero-emission) virtues, electric buses benefit from reduced vibration and noise pollution, while offering superior operating efficiency and low maintenance compared to the diesel alternative. Their up-front cost, however, remains daunting, at almost US$300,000 (RMB 2 million) per vehicle. Beyond even their unit price, the most important factor inhibiting the spread of such buses is the cost of initial infrastructure, and the attendant requirement for bold policy decisions that select a particular development path (among a variety of tantalizing options, that include at least four basic alternatives for electric buses alone). World Expo, due to its tolerance for large-scale experimental investment and its rigid timetable, plays an important role in both supporting and forcing such decisions.

The Expo supercapacitor buses are part of a larger zero-emissions fleet that consists of a mixture of vehicles, including alternative electrical and hydrogen fuel cell models. A further 4,000 hybrid buses have been added to the city's wider public transport network in time for the event.

Shanghai automakers are clear beneficiaries of the Expo's electric jump-start. They aim to manufacture 300,000 alternative-energy vehicles for sale within the country by 2015.

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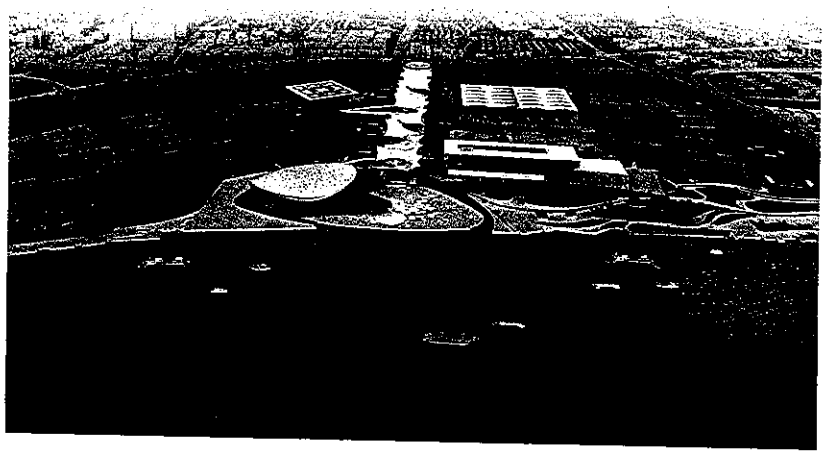
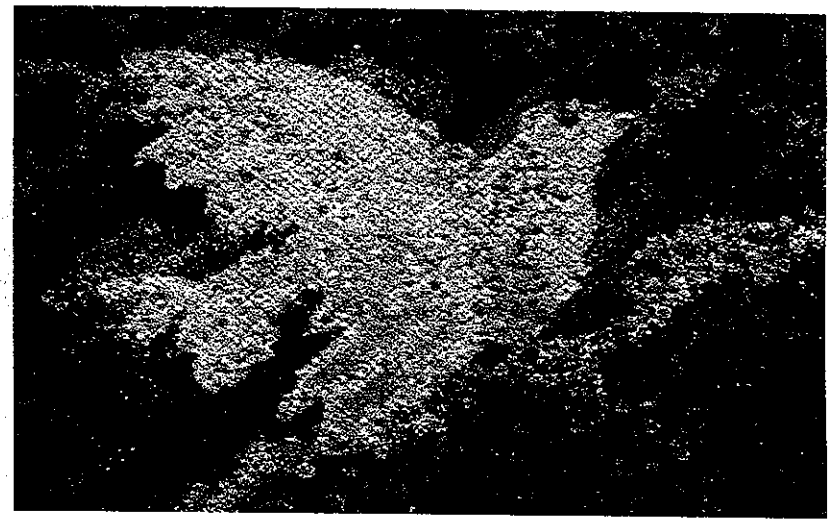
from the beginning. Yet the eventual collision was hugely moderated by the fact that articulate environmental ideologies were comparatively slow to appear, and by the time they did so, in the second half of the 20th century, the assertive modernist confidence underlying the classical Expos of the 19th century had already been shattered, for quite other reasons (see pp.106-7). If not quite cringing, the Expo's of the 1960s and onwards were at least highly sensitive and malleable. Under the influence of transnational bureaucracies, including the BIE and the United Nations, successive concessions to green concerns by Expo organizers and participants gradually eroded recriminations, while leaving the underlying tension unresolved.

It is only very recently that the basis for more positive reconciliation has emerged, attuned simultaneously to an ethic of sustainability and Expo traditions of technophilic growth-orientation. By the turn of the century, the continuous expansion of the services sector and the evolution of 'creative industries' was being reinforced by trends to extreme miniaturization, substantially realized by the electronics industry and heading into 'nanotechnological' realms of atomic-scale manipulation. These developments, in combination with increasingly plausible visions for practical alternative energy systems, were gradually decoupling economic growth from energy and raw-materials consumption and ultimately promising to entirely break the identification between industrialism and fossil-fuel economies. In this climate, green initiatives were – at least germinally – beginning to take the form of industrial opportunities, rather than protest movements.

When green industrialism meant only less industrialism, the relationship between environmentalism and the Expo could only be essentially abusive. With the possibility that green industry could be a more advanced, more technologically sophisticated, and even more productive mode of industrial activity, a genuine synthesis was at least tentatively envisaged, and sustainable futurism became something other than an oxymoron. As prospects for sustainable acceleration become first imaginable, then increasingly compelling, environmentalism grows up, and the World Expo returns to itself, re-invigorated and unafraid.

The Expo's environmental agenda operates at three broad and interconnected levels. The most rarefied, most conceptual, and arguably most important, is primarily educational. At this level, which is coordinated with the United Nations and



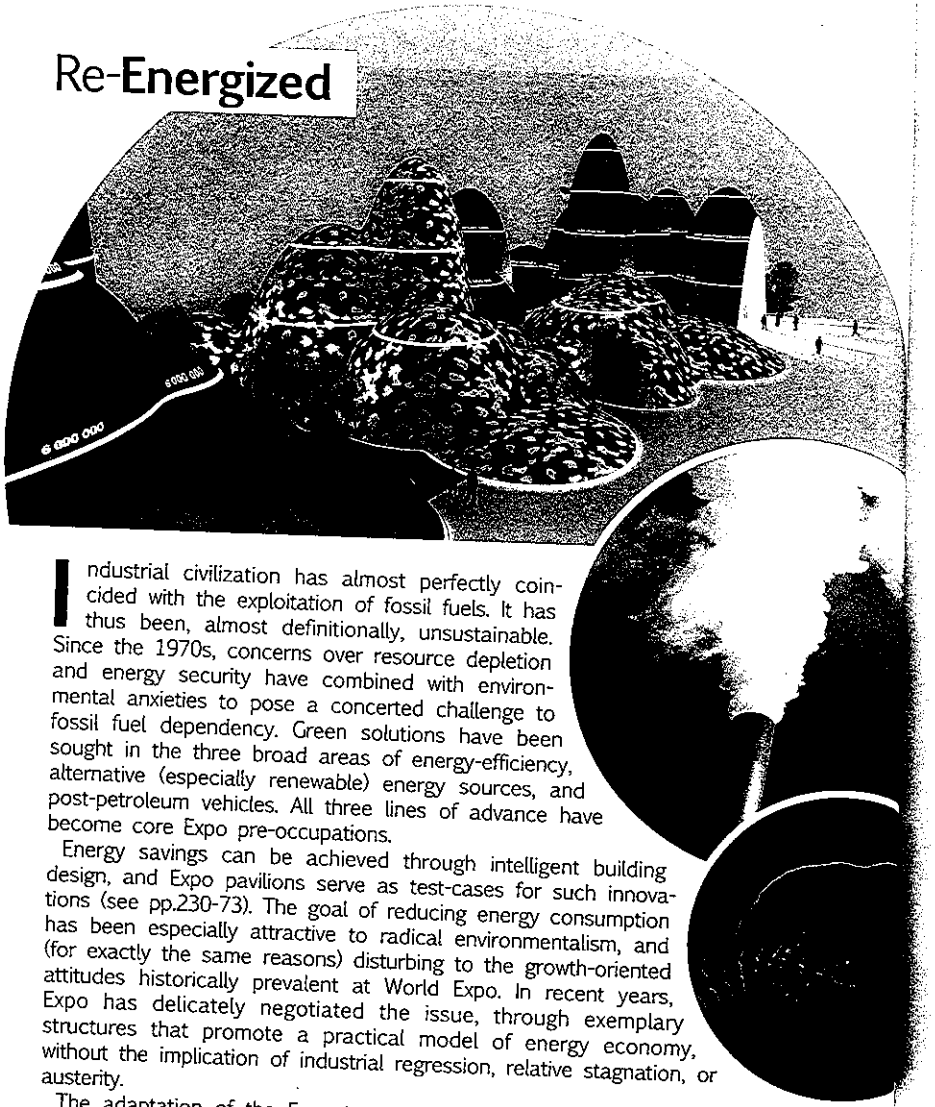


linked directly to the Expo theme and sub-themes, as well as to its multitude of forums and pedagogical presentations, environmental problems and solutions are defined, discussed, compared, and publicized, placing Expo traditions of intercultural exchange in the service of environmental awareness and the dissemination of best practices.

The next level is demonstrative, and covers application of green ideas and technologies in and around the Expo site. Whilst the structures and facilities involved at this level exhibit environmental impact, it is the exhibition rather than the impact that serves as their principal justification. Some critics have pointed to an apparent contradiction between the Expo's temporary (or, more harshly, 'disposable') structures and the green ethic of sustainability, but this is to confuse demonstration with implementation. The Expo is a communication medium and its structures are exhibits – therefore messages – to be judged according to their influence rather than their actual 'footprint'. There is no other way to draw serious general conclusions, since Expo buildings are typically unique demonstrations, which cannot, by their very nature, be taken as examples of common (and thus environmentally consequential) behaviors. A green accounting that restricts itself to the contruction, operation, and dismantling of Expo facilities necessarily misses – or dismisses – the purpose of the event.

As might be expected, the truly practical level of Expo-related environmental activity is found in the Expo site's own environment, which is to say, in the host city as a whole. It is here that the implementation – or currently practical application – of green ideas and technologies takes priority over demonstrative effect, although the exhibitionary aspect remains, of course, very far from negligible. The World Expo's rising green agenda has become integral to showing the host city at its best, to providing a hospitable environment for visitors, and to the definition of long-term improvement guiding its Expo-catalyzed redevelopment. At Expo 2010, the urban reconstruction attending the event has taken place on an unprecedented scale (see pp.49-50, 204-19) and this has centrally included acceleration and expansion of the city's environmental development. ✖

Re-Energized



Industrial civilization has almost perfectly coincided with the exploitation of fossil fuels. It has thus been, almost definitionally, unsustainable. Since the 1970s, concerns over resource depletion and energy security have combined with environmental anxieties to pose a concerted challenge to fossil fuel dependency. Green solutions have been sought in the three broad areas of energy-efficiency, alternative (especially renewable) energy sources, and post-petroleum vehicles. All three lines of advance have become core Expo pre-occupations.

Energy savings can be achieved through intelligent building design, and Expo pavilions serve as test-cases for such innovations (see pp.230-73). The goal of reducing energy consumption has been especially attractive to radical environmentalism, and (for exactly the same reasons) disturbing to the growth-oriented attitudes historically prevalent at World Expo. In recent years, Expo has delicately negotiated the issue, through exemplary structures that promote a practical model of energy economy, without the implication of industrial regression, relative stagnation, or austerity.

The adaptation of the Expo to green energy goals has been smoothed by the fact that the technological main current running through its history – the transition to electrified power supply – is essential to realistic, environmentally-improved energy solutions. When compared to thermal power ('steam'), electricity is 'abstract' – liberated from specific means of generation. Because it can be produced in an almost open-ended number of different ways, it opens the door to supply innovation. Furthermore, it allows multiple sources to develop in parallel, encouraging experimental approaches. Alternative energy developments range from high-technology versions of pre-modern resources (wind, hydro), to ultramodern alternatives that have raised environmental concerns of their own (nuclear fission), and even to speculative or futuristic possibilities with unclear prospects and implications (geothermal, nuclear fusion). The alternative energy technology most suited to Expo application and demonstration, starring once again in 2010, is solar (see p.37).

In the field of environmental energy development, automobiles pose special problems, stemming ultimately from the comparative inflexibility of the internal combustion engine, which has only incrementally evolved in the course of over a century. As power grids have diversified their energy sources, plugging electricity from renewables into their networks, road vehicles have remained tightly bound to petroleum (or close substitutes, such as biofuels).

In urban areas, mass transit systems that substitute electricity for oil-based fuels provide a partial solution, moderating overall fossil fuel consumption. Shanghai's vastly expanded Metro system contributes one (large) piece of the Expo's environmental jigsaw (see p.212). Expo-related mass transit projects are a time-tested tradition (see p.104).

Changing cars themselves – beyond making them smaller and gradually more fuel-efficient – poses a far more technologically challenging problem, or range of problems. As with many other profound technological transitions, network effects are a crucial consideration (see p.31). The internal combustion engine network might lack the obvious integrity of the electrical grid or copper-wire telephone system, but it is nevertheless robust and deeply rooted, with gas stations as basic nodes. Like any other network, it operates initially as a massive inhibitory factor, and only much later as an accelerator of change, ensuring that transition takes the form of a drastic 'catastrophe' (in the technical sense), flipping with comparative suddenness from one regime to another. Each individual driver requires an entire refueling network, and no such network can be assembled until confidence in a mass market has been consolidated. Breaking such chicken-and-egg dilemmas typically requires catalytic action by governments or very large-scale business organizations, bearing up-front costs and risks in order to provide an emerging industrial system with vital supportive infrastructure, standards, and released demand.

For such risk-taking to be bearable, a measure of confidence is required as to the nature of the upcoming industry, and in this respect even the basic outlines of the emerging automobile revolution remain paralyzingly uncertain. One broad genre of possibilities is electrical in nature, based on improvements in battery technology and an infrastructure of recharging stations, perhaps operating through changes of rented batteries (in order to minimize recharge waiting times). Whilst such a model provides by far the neatest and most comprehensive solution to the road transport problem, by subsuming vehicle fueling into the general power system, its triumph, at least in the near term, is far from assured. For buses, at least, Expo 2010 had played a catalytic role in the electrification of road transport (see p.38).

There are an intimidating range of alternatives to the electrical road of tomorrow. These base themselves on comparatively incremental changes to automobile engines, most minimally through development of biofuels (ethanol) that can easily replace, or be combined in variable proportions with, petroleum. A more radical variant is offered by liquified natural gas (LNG), a non-renewable but relatively abundant fossil-fuel substitute. The most ambitious candidate is hydrogen, which would actually function as a power storage system rather than a fuel source (electrically separated from water, and then burnt in the engine through recombination with oxygen, producing water emissions). Competition between these various visions of future road transport can be expected to enliven World Expo over the next decade (at least), with enormous implications for patterns of global energy consumption. ✖

Hot Topic

Eric Lelieu

As the Expo has gone green, greenery has itself undergone remarkable changes. During the early years of the new millennium, previously disparate concerns ranging from industrial and household pollution to population stress, deforestation, degradation of arable land, destruction of natural habitats and the loss of biodiversity (through species extinction) have been largely eclipsed by anxieties about the environmental consequences of human carbon dioxide emissions. Whether diagnosed as the greenhouse effect, anthropogenic global warming (AGW) or – most recently, vaguely and comprehensively – 'climate change', the effects of atmospheric CO_2 concentrations have risen to emblematic status as the definitive green issue.

Preparations for the 2010 World Expo have coincided with a critical period in the worldwide discussion over the science and politics of human carbon dioxide production. Despite broadly encouraging trends towards a new green-industrial synthesis, in which development of alternative energy and related technologies are seized as economic opportunities, rather than threats to growth, the enormous complexities involved in squaring the agendas of development, environmentalism, and international cooperation have never been clearer. The 2009 international climate change summit in Copenhagen brought these complexities into focus just as the 'Climategate' email leaks from Britain's Climate Research Unit (previously considered the world's most authoritative source of global climate data) exposed the troubling mismatch between the ethics of rigorous scientific inquiry and of environmental advocacy.

By the beginning of the Expo year, assumptions that an international, scientifically-impeccable consensus existed for drastic 'precautionary' action to curb carbon emissions had become difficult to sustain. The supposed bedrock of consensus, the UN's IPCC (Intergovernmental Panel on Climate Change), had become mired in controversy after a series of errors were exposed in its 2007 Assessment Report, greatly strengthening the position of 'climate sceptics', polarizing opinion, and sharpening divisions between advocates of growth and of greenery. Even in the non-confrontational atmosphere of the World Expo, environmental issues in 2010 threatened to generate an unusual degree of rancor.

With discussion in this area more heated than ever before, Expo 2010 is certain to be remembered, among other things, as the 'Global Warming Expo'. Among the most widely cited cautionary mottos to emerge during the debates over AGW is the reminder that 'weather is not climate'. Yet, however irrationally, during the course of what is set to be the most environmentally attentive Expo in the 160-year history of the event, everybody will be keeping an eye on the temperature. ✖

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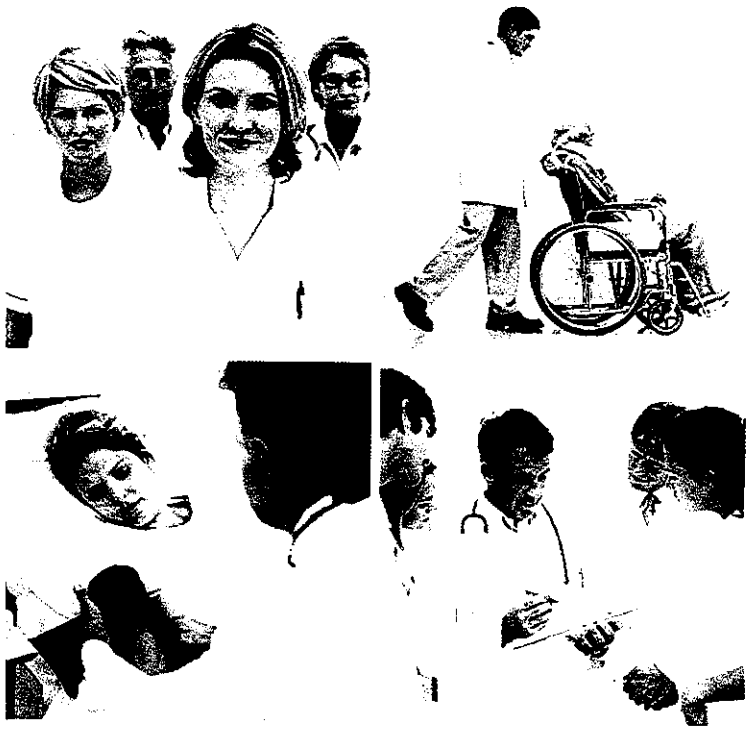

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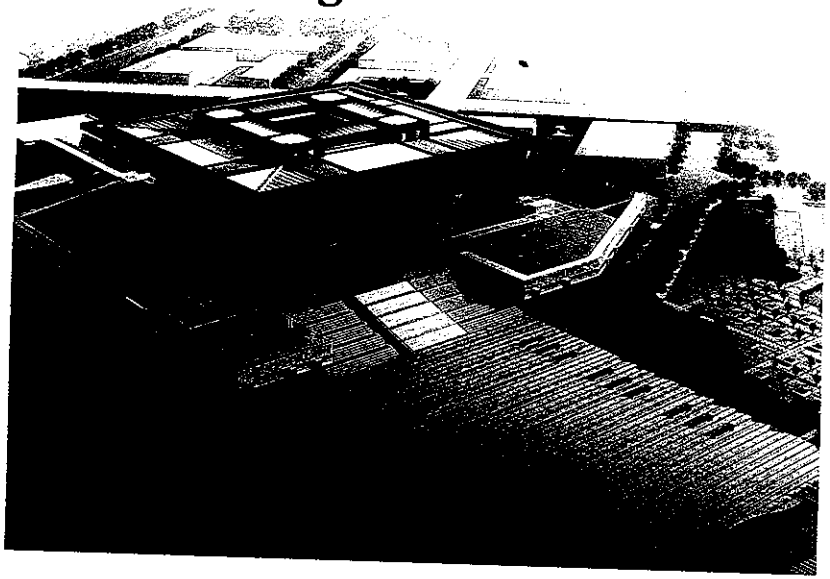
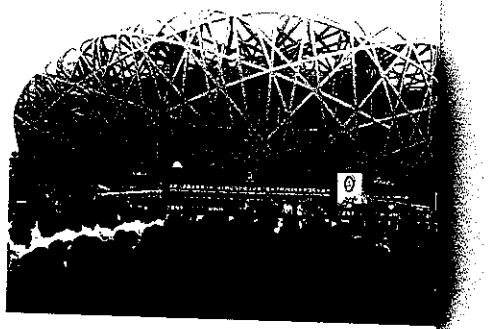
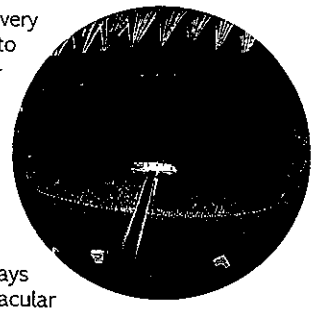




Spectacle has been granted a special place in Chinese culture since the distant dawn of its recorded history. While contemporary architects and designers pursue the essence of 'Chinese style' into the nooks and crannies of specific construction techniques, its most significant and influential trait is a commitment to the production of psychological effect on a massive scale. China's great philosopher of war Sun Tzu exemplifies this continuous line of spectacular tradition, when he argues that the aim of the general is less to kill than to create an overwhelming impression on the enemy. The same thread passes through the invention of fireworks and the layout of the Forbidden City (constructed as a succession of theatrical gateways) to the glittering East Asian cityscapes of today, built almost as stage props for epic dramas of development, and painting vast panoramas in artificial light. This tradition of all-enveloping theater and aesthetic staging, vividly exhibited at the 2008 Beijing Olympics and the 60th anniversary of the New China in 2009, is naturally predisposed to affinity with the World Expo, an event whose very name calls for a spectacle of planetary dimensions.

As theater created on an immense scale, the Expo is aimed at an audience. Its structures are for the most part temporary, designed to make a powerful impression, to communicate, and to persist in memory, enduring not through solidity of construction, but through the effects they produce. At every level of physical organization the Expo is pre-adapted to fluidity, anticipating as many as half a million people flowing through the Shanghai Expo Park on certain days, with tens of thousands streaming through particular pavilions. Although something like a miniature city, the Expo site and its pavilions are not designed for inhabitants and their possessions, or for workers and their tools, but for visitors and their experiences. Everything is performance: transient, dramatic and informative.



Throughout Chinese history, the art of politics has always been intimately interwoven with the techniques of spectacular demonstration. This mainstream tradition is naturally focused upon Beijing, the nation's political center, whose monumental Imperial architecture consistently betrays a theatrical design, constructed with reference to the awestruck perspective of a lowly observer, rather than for the comfort of a privileged occupant. That Beijing maintains a rare mastery in the field of grand spectacle – exhibited in the international and national pageants of 2008 and 2009 – should surprise no one.

Yet Shanghai has claims to a spectacular lineage of its own. The city's location at the mouth of the Yangzi, where it communicates between the vast Chinese interior and the open horizons of maritime commerce, makes it the natural shop window of an emerging industrial giant. History and geography intersect in Shanghai to produce a national display case, where the obscure immensities of China's past, present and future are artfully presented to foreign eyes, and no less to eyes that merely feign foreignness, in order to revel in the exotic pleasures of cosmopolitan detachment.

Shanghai is incandescent, because it manifests huge and hidden things. Economic forces and world trends of incalculable consequence are condensed, illuminated and reflected among its towers. China's film industry was born in the city, fashion flourishes luxuriantly in its streets and showrooms, the advertising industry crosses new frontiers upon the surfaces of its cityscape, and every imaginable variety of conspicuous consumption saturates its retail and entertainment spaces, converting economic potential into vivid sensation.

It has been Shanghai's irresistible fate to become a city on show, delighting in attention, and leaving no observer disappointed. Even had the World Expo been deliberately tailored for Shanghai, it could not more perfectly fit the city's tastes and unique genius. From a certain tempting perspective, the World Expo is Shanghai amplified, distilled, and celebrated, in a festival of cosmopolitan exhibitionism. Since the late 19th century, Shanghai has absorbed its status as a world city into the core of its identity. Like other world cities (New York provides the most obvious comparison), Shanghai's global significance has nourished a self-absorption that would be insufferable, were it not that the city harbors the entire world within itself, its limitless self-regard entirely ameliorated by an equally unlimited openness. For Shanghai, hosting the world is a mission so natural it almost seems an original destiny.

Better still, World Expo 2010 turns Shanghai's self-regard into a solemn obligation. The 2010 Expo theme, Better City, Better Life, firmly places urban existence center stage for the first time in the history of the event. Never before have the international wonders on exhibition fused so seamlessly with the surrounding megalopolis, making the Expo host into the principal exhibit. ✱

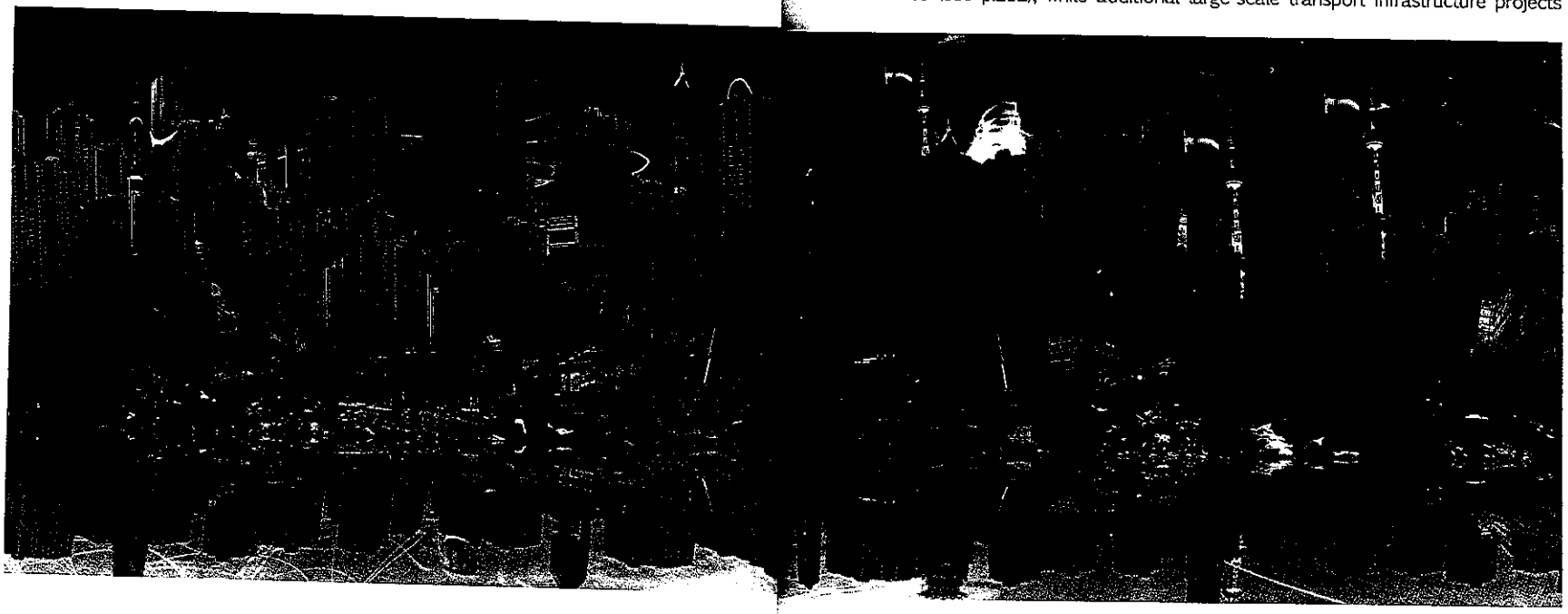
The Shanghai **Spectacle**

Besides Shanghai's essential theatricality and internationalism, its lustre as a gateway to China, and its status as an urban model, there is yet another factor that ensures its deep affinity with, and suitability for, the role of early 21st century Expo host: its extraordinary development momentum. Under any circumstances, World Expo preparation is urban development on steroids, demanding a scale and pace of concentrated change that is unmatched in its intensity, uniquely testing the limits of a city's institutional, economic and technical capability. In the case of Shanghai's 2010 World Expo, an unprecedented focus on the city as thematic topic has combined with ambitions of stupendous magnitude to produce a publically-exhibited development episode of remarkable historical significance and grandeur.

Since China's tidal wave of Reform and Opening reached Shanghai in the early 1990s, the city's blistering development pace has provoked astonishment in observers, both inside and outside the country. This surge of urban transformation has been epitomized by the rise of Pudong New Area, and especially its Lujiazui Central Business District, which metamorphized from swampy farmland into a glistening highrise core of cyclopean magnificence – and probably the most architecturally-extravagant patch of earth to be found anywhere in the world. In 2003, Pudong's new International Airport was connected to the downtown by the world's first Maglev railway, as if to symbolize the attainment of antigravity and escape velocity. Yet the Pudong story was echoed, with only slightly dampened excess, throughout many other parts of the city. Supertall towers sprouted up among new highways and Metro lines, linked by warrens of cross-river tunnels, giant bridges, prestige cultural institutions, expanded parks, restored urban heritage and creative hubs. Downtown Shanghai has added no less than 400 skyscrapers since the early 1990s. By the beginning of the new millennium, Shanghai had become an international icon of ultrarapid development in the dawning Asian Century.

The hard thrust of 1990s urban reconstruction in Shanghai, characterized by architectural audacity, hypermodern design, and limitless vertical aspiration, was augmented by softened approaches as the new century unfolded. Heritage restoration acquired a hugely influential model with the completion of the Xintiandi lifestyle hub, consisting of renovated shikumen blocks packed with chic leisure venues. Industrial and residential legacy structures were refashioned into arts, recreation and 'creative industry' clusters, as the raze-and-rebuild model of urban renewal made way for a re-estimation and re-animation of the city's physical inheritance. Downtown green space was extended and improved, waterways were cleaned, and the prestige buildings of the colonial period were sensitively revamped and repurposed as boutique shops, restaurants and bars, art galleries, and hotels. New birth was also rebirth, and Shanghai's reputation added the qualities of urban renaissance to those of urban pioneering.

When Shanghai won its bid to host the 2010 World Expo, on December 3, 2002, both dimensions of its renewal were dramatically accelerated. Shanghai's self-reinvention adjusted to a new urgency, a strict schedule, and a precise goal, as Expo preparations subsumed its already extraordinary urban development programs and elevated them to yet higher levels of ambition. Its fledgling metro system (dating back to 1994) was expanded into a giant multicolored noodle-bowl of interconnected lines (see p.212), while additional large-scale transport infrastructure projects

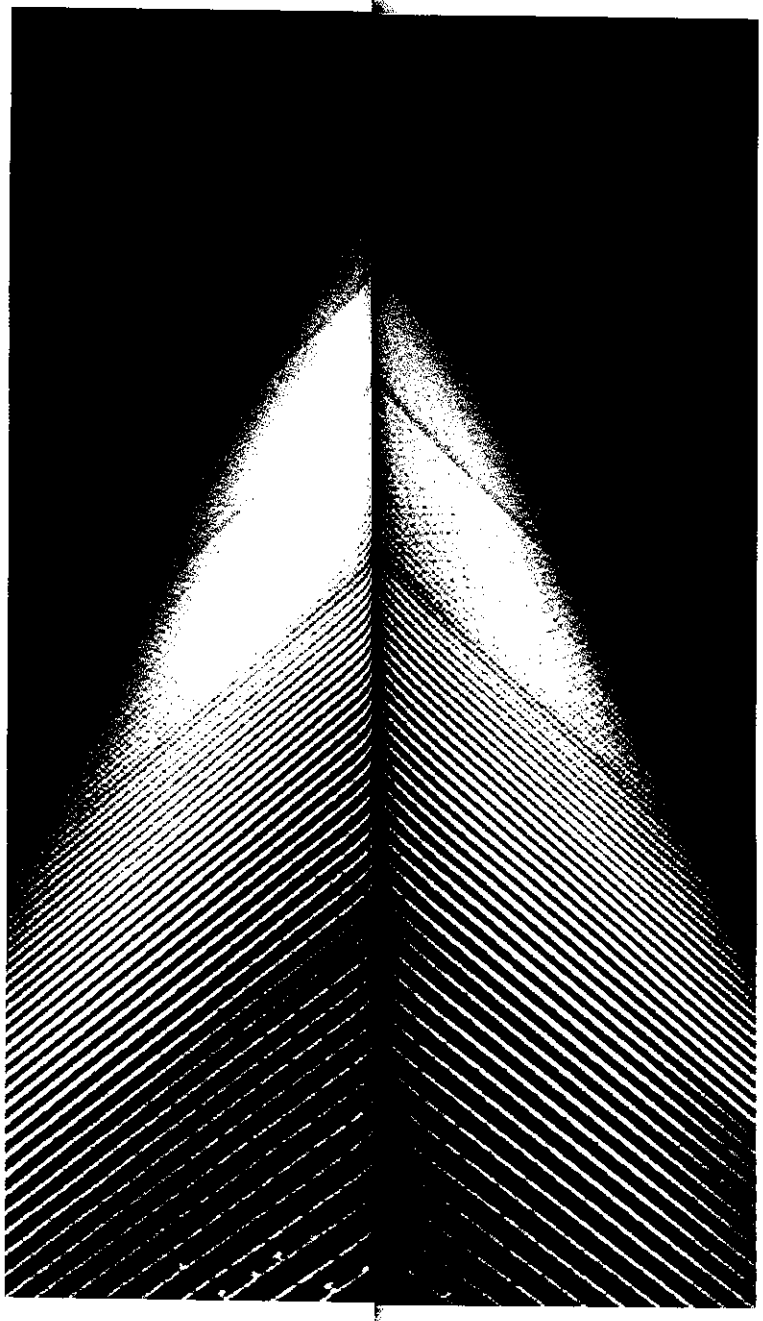


Zongmei Zhang

upgraded road, rail, air and cruise links (see pp.208-13). Power grids, communications, sewerage and water systems were renovated (see p.214). The iconic Bund area underwent a second wave of comprehensive restoration and redevelopment (see pp.166-7), and a system of raised pedestrian walkways refashioned Lujiazui (see p.209). As the event approached, the flood of reconstruction swept across every road, sidewalk and facade in the city, whilst the pre-existing development process continued (and intensified), adding yet more superskyscrapers, creative centers, leisure venues, parks, galleries and malls.

The site chosen for the Expo park lies at the intersection of the city's Luwan, Huangpu, and Pudong Districts, between the Nanpu and Lupu Bridges, to the south of the Bund waterfront, Old City, and Lujiazui Central Business District. It straddles the Huangpu in an area of compelling geographical and historical interest, with roughly three quarters of the area situated on the southern and eastern side, in Pudong. Occupying both banks of the Shanghai's 'mother river', close to the urban downtown, the site promised to deepen cross-river communications, knitting the two sides of the city together as never before, while drawing development attention to the recently neglected (and heavily polluted) industrial heartland of Old Shanghai, where the Jiangnan Shipyard and Shanghai No. 3 Iron & Steel Company had once spearheaded the city's economic modernization.

Covering an area of 528 hectares, the Shanghai Expo Park is the largest in history, four times the size of the 2005 Aichi Expo site (and twice the size of the country of Monaco). Reconstruction of the area was linked to an interconnected series of waterfront renovation projects that extended along the entire downtown exposure of the river. On the Pudong side, a 14-hectare stretch of wetland park was created as a cooling 'green lung' for the site, combining natural and landscaped areas. Clearing and cleaning the area required the relocation of 270 functioning factories to more spacious, technically-upgraded industrial facilities on the city's new outskirts, many kilometers away, while



18,000 families (totaling 60,000 residents) occupying run-down buildings in the vicinity were resettled in improved housing nearby.

Within the Expo Park, the enclosed (ticketed) core covers 322 hectares, organized into five basic zones (coded A-to-E). Zones A, B, and C lie on the Pudong side, zones D and E in Puxi. Within this core area, 32 distinct major event venues (six indoor and 26 outdoor) provide the capacity to accommodate audiences of over 200,000 simultaneously. The five zones host more than 200 pavilions, including about 40 national pavilions designed and constructed by participating countries. Pavilions are organized into 12 groups (eight in Pudong, four in Puxi) that are further divided into 26 clusters, each covering an area of 2-3 hectares and containing 40 to 45 exhibition units, along with refreshment and retail venues, service centers and public amenities. National pavilions are sorted into geographical groups and fall under three categories: those designed and built by participants; those rented from the organizer; and those provided by the organizer (free of charge) as joint pavilions for developing nations. Roughly 30% of the Expo structures are expected to be permanent.

Zones A and B are connected by the largest Expo structure, the 1.3-kilometer-long Expo Axis (or Expo Boulevard): a 100-meter-wide elevated thoroughfare that links up the main permanent constructions (China Pavilions, Expo Center, Culture Center and Theme Pavilions). The Expo Axis was designed by SBA and constructed by Knippers Helbig as the largest membrane edifice in the world, with an exotic structure punctuated by steel and glass cooling and water-gathering funnels. With two levels above ground and two below, the Expo Axis is not only the Expo's major transit artery, but also its central and most concentrated commercial, dining and entertainment space (see p.233).

Zone A (55 hectares) contains the China Pavilions (National, Regional, Hong Kong, Macau and Taiwan, see pp.230-1) along with the national pavilions of non-ASEAN Asian countries. The centerpiece of the zone (and even of the site as a whole) is the China Pavilion (or 'Oriental Crown'), a bold red

inverted pyramid reminiscent of a classical urn (ding), standing 63 meters in height, with 160,000 square meters of total floor space. The tiered structure echoes the Corbel or 'dougong' bracket technique employed in many ancient Chinese buildings, while the deep earthy red has time-honored connotations of good fortune and is familiar from many classical edifices, including Beijing's Forbidden City. Both color and design reflect a balancing of modernity and tradition that is elaborated by the exhibition inside, with its theme of 'Chinese wisdom in urban development'.

Zone B (88 hectares) contains the World Expo Center, the Expo Culture Center, the Theme Pavilion, national pavilions of ASEAN and Oceania countries, and pavilions for international organizations. The World Expo Center provides 140,000 square meters of floor space for celebrations, conferences, forums and media events (see pp.234-5). The elegantly curved Culture Center, with a total floor area of 126,000 square meters, serves multiple purposes as a performance arts, conference, spectacle and entertainments center (see p.232). The Theme Pavilion provides a further 120,000 square metres of space for explorations of the major Expo themes, focusing in turn upon the denizens of cities, their lifestyles, ecological impact, their memories and their dreams (see p.234).

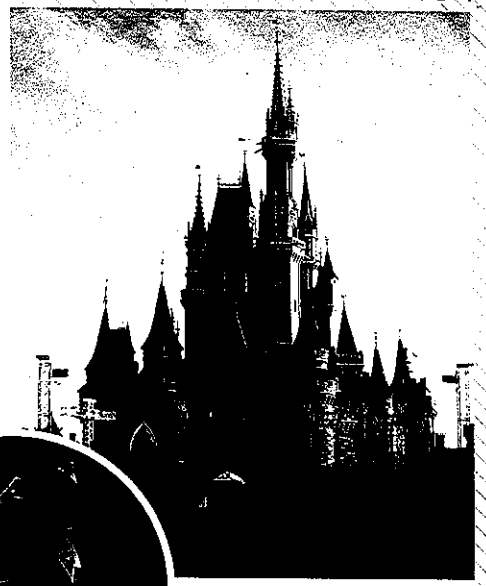
Zone C (104 hectares) contains European, American and African national pavilions, along with a 10-hectare public amusement park at the entrance.

Zone D (50 hectares) covers the area of the old Jiangnan Shipyard, a previously neglected tract of derelicted waterfront that has now been recognized and restored as one of China's most important industrial heritage sites. Some of the old buildings have been renovated into corporate pavilions, with the docks and giant slipway to the east transformed into outdoor exhibition and cultural assembly space.

Zone E (25 hectares) contains the Urban Best Practices Area (see pp.222-6), World Exposition Museum, and stand-alone Corporate Pavilions (see pp.268-73). The Urban Best Practice Area (UBPA) is one of the two principal innovative feature of the 2010 Expo. It consists of four exhibition areas dedicated to housing solutions, urban sustainability, heritage protection, and new technologies. It covers 15 hectares and offers space to guest cities from around the world to present their contributions to contemporary urbanism. The World Exposition Museum serves as a showcase for artifacts and information that add historical perspective to the 2010 episode of a spectacular festival approaching its 160th birthday. The Corporate Pavilions display some of the most stunning designs and engaging exhibition content to be found at the event, representing fields of economic activity (Aviation, Information and Communication, Oil, Shipping, Space), business regions (Chinese Private, Japanese Corporate, ROK Joint-Corporate, Shanghai Corporate), or major companies from around the world (Aurora, Cisco, Coca Cola, PICC, SAIC-GM, State Grid, Vanke). In total, the 16 Corporate Pavilions cover an area of 11 hectares.

Urban areas in the proximity of the Expo site have undergone especially dramatic recontruction, with private development projects complementing municipal undertakings. An especially remarkable example is provided by the Jumen Road redevelopment, on the main axis through the city's Luwan District, connecting to the site from the north (see pp.218-9). On Jumen Road, a previously ramshackle collection of derelict industrial structures, deteriorated residences and shops has been refashioned into leisure, exhibition and office space to meet overspill Expo demand, laying the foundation for long-term gentrification of the area. Nearby residential property values have risen accordingly, often to astronomical levels. Such property development effects constitute an essential ingredient of the Expo's local (and municipal) economic calculus. ■

Theme Lines



In November 2009, with Shanghai's Expo excitement approaching its crescendo and US President Barack Obama about to visit the city, the municipal government announced that an agreement had been signed with the Walt Disney Corporation to build a Shanghai Disney theme park. Funding of the project was expected to reach US$4 billion, among the largest foreign investments in Chinese history. Disney would take a 43% stake in the venture, with the Shanghai Shendi Travel Resort & Development Company holding the remaining 57%. Covering an initial area of just 1.16 sq km, the Shanghai Disney Park would open as the world's smallest.

Jeffrey N. Wasserstrom, editor of the Journal of Asian Studies, was among a small number of commentators to emphasize an Expo connection. He half-jokingly noted that the University of California-Irvine, where he works as a professor of history, is situated closer to the original Disney theme park than any other major research university, stimulating his thoughts "about the complex ties between the International Exhibition lineage that the 2010 Expo will continue, on the one hand, and Disney theme parks, on the other."

Wasserstrom assembles a number of telling facts to support the link. For instance, Walt Disney's father worked as a carpenter at the 1893 Chicago Expo, which is remembered for the first Ferris wheel and its dreamlike 'White City'. Walt Disney himself played an important role in the planning for the New York Expo of 1964-5, his Epcot Center in Florida adopted various Expo-style features, and several attractions from the 1964-5 Expo were reborn in Disney parks around the world.

Japan's first Disney park (which was also the first in Asia) was built shortly after hosting a major international spectacle (the 1964 Tokyo Olympics), whilst its first World Fair (the 1970 Osaka Expo) was quickly followed by construction of a Universal Studios theme park. Equally noteworthy is the fact that Paris, a city associated beyond any other with the Expo tradition, is also the only European city to host a Disney.

Recognizing the special prominence of the World Expo within a history of immersive entertainment environments opens new vistas for inquiry into its cultural impact. These artificial spaces, designed for experience and thematic exploration, seem to prefigure the computer-generated virtual realities of today (exemplified by the 2010 Expo Online, see p.33). They also draw attention to a distinctive functional dimension of contructed environments, one that is easily overlooked by architects and urban planners briefed by an unduly narrow sense of utility.

For Shanghai, more specific questions arise. How much has to end on October 31, 2010? Can the city realize a permanent 'Expo effect', sustaining magnetic, themed spaces beyond the end of the event? Wasserstrom cites Huang Renwei (of the Shanghai Academic of Social Science), who likens the Disney park to "a never-ending Expo." The city's tourist industry stands at the forefront of those hoping Huang is right.

Shanghai World Expo 2010, Basic Facts

Shanghai World Expo 2010 (2010上海世界博览会) takes place from May 1 to October 31.

The Expo 2010 theme – 'Better City, Better Life' – reflects the development priorities of the predominantly urbanized world of the new millennium, as well as the exceptional characteristics of its vast, rapidly self-renewing host city, Shanghai. The Expo also has five sub-themes: Blending of Diverse Cultures in the City; Economic Prosperity in the City; Innovation of Science and Technology in the City; Remodelling of Communities in the City; and Interactions Between Urban and Rural Areas.

The Expo 2010 emblem, based on the Chinese character for world (shi, 世), depicts three people (corresponding to the first, second and third person pronouns), locked together in an amicable embrace.

The Expo 2010 mascot, Haibao (meaning 'treasure of the sea') is designed from the Chinese character for people (ren, 人). The 'hai' of Haibao represents Shanghai and its open ocean culture (haipai). Haibao's oceanic features include a maritime-blue complexion, a rolling wave in his hair, and aquatic, paddle-like hands (see p.57).

World Expo 2010 Shanghai shatters Expo records for the physical size of the site (528 hectares), visitor numbers (over 70 million) and the number of participating countries and organizations (over 240). Previous holders of these records were, respectively, Expo 1939-40 New York (500 hectares), Expo 1970 Osaka (64 million), and Expo 2000 Hanover (170 countries and international organizations).

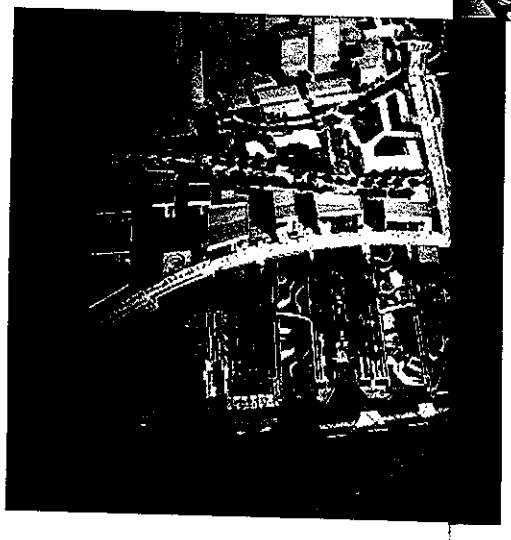
The two principal innovations of World Expo 2010 Shanghai are the Urban Best Practices Area, a large scale exhibition of exemplary models for city living from around the world (see pp.222-6), and Online Expo Shanghai (www.expo.cn, see p.33) where the event is reconstructed in Cyberspace.

Access to the Expo's enclosed (ticketed) area starts at 9am, with pavilions open from 9:30am-10:30pm, and restaurants open until midnight. In order to avoid long queues, pavilion viewing reservation tickets can be obtained from 22 on-site machines.

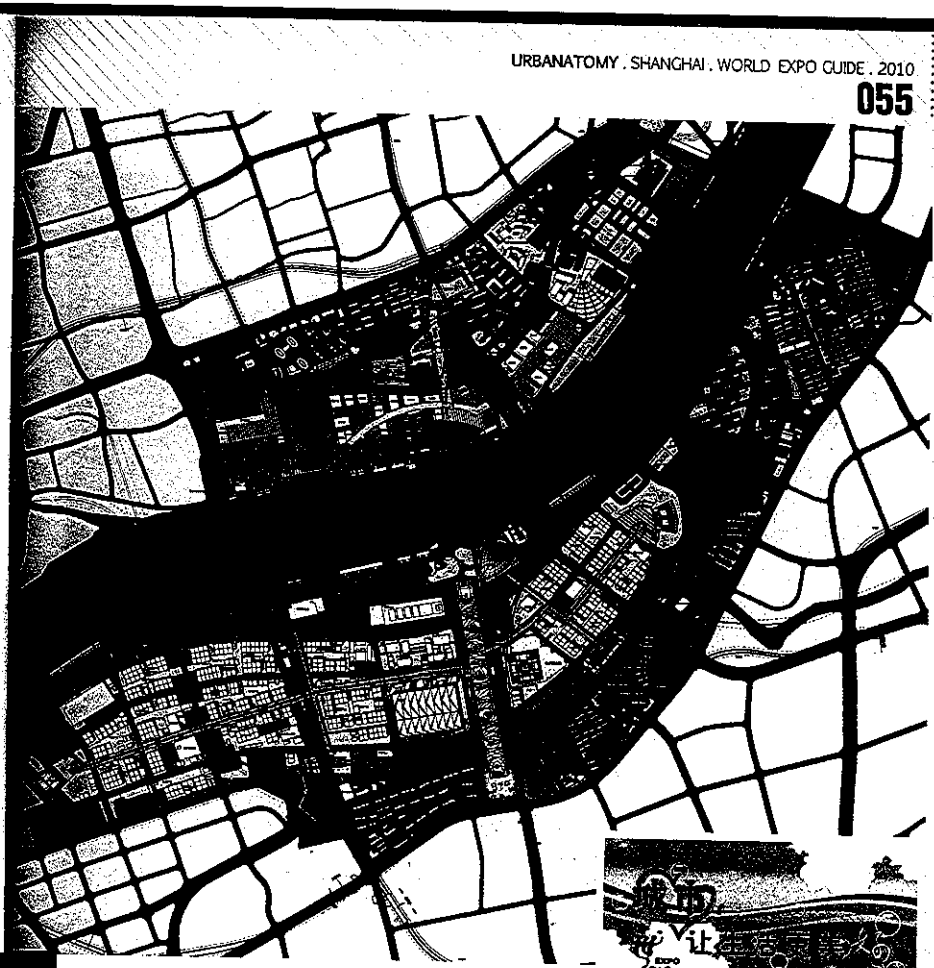
Forty refreshments centers host outlets from a wide range of domestic and international restaurant chains, offering more than 300,000 meals a day (at prices held down to the downtown Shanghai level). Coffee and snacks, popular fast-food options, Shanghai classics (from hairy crab to soup dumplings), Chinese regional favorites and international gourmet dishes are all available on site. Two thousand on-site faucets supply drinking water.

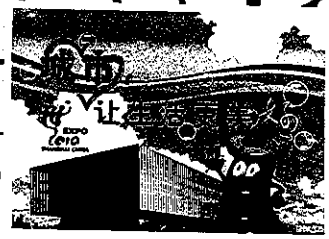
Over 8,000 technologically-advanced toilet cubicles are deployed around the site.

Fifty-four visitor centers provide a full-spectrum of services for visitors, including information, emergency medical service, baggage checks, recovery of lost property and stray children, complaint registration and assistance for those with special physical needs (with walking sticks and wheelchairs available without charge). Additional information desks (to a total of 80) are conveniently located around the site. A cheerful army of volunteers (70,000 strong) is ready to help visitors and to offer child care services, while 10 Red Cross posts supported by over 600 medical professionals will be on hand for medical contingencies. Five emergency medical stations and a special ambulance service have been organized by the city's major hospitals in preparation for serious medical problems.



On-site transportation is provided without charge by 120 zero-emission shuttle buses, arriving every three minutes. One bus route makes a comprehensive (14-kilometer) Expo tour crossing the river by tunnel, while another makes a (3- kilometer) circuit of the Expo core in Pudong. Stops are positioned every 300 meters. Alternatively, eight-seat electric buggies (fee payable) can be boarded at any point on the site. A fleet of more than 70 ferries cross the river between two wharves in Puxi and three in Pudong (with an extra VIP wharf on the Pudong side).



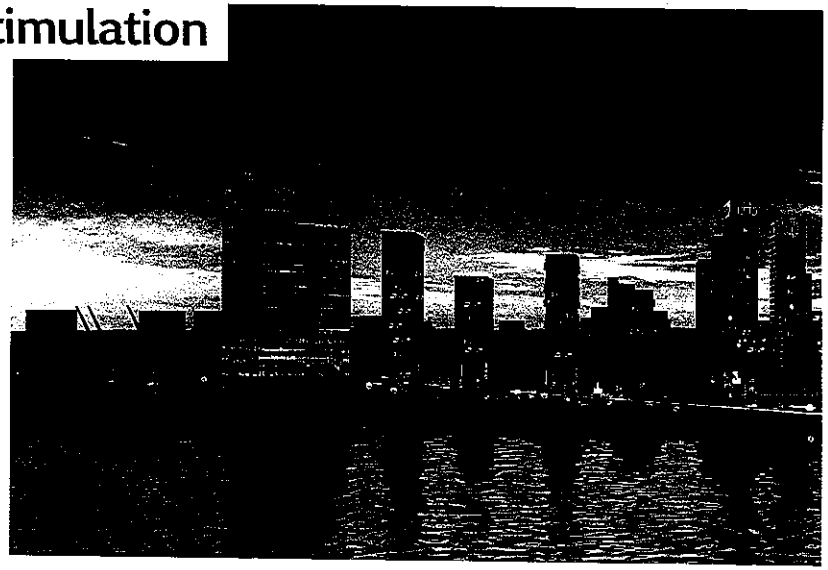


Transportation to the Expo site relies primarily on the city's extensive subway, with lines 4, 6, 7, 8, 9 and 13 all connecting to it. Nineteen parking lots are situated close to Expo-site entrances, with capacity for 4,000 buses, but convenient space for private car-parking is limited.

The Expo site is eqipped with 25 ATM machines, and all its retail outlets have bank-card readers (EFTPOS machines). The site is served by eight post-offices.

Bottled drinks and cigarette lighters are banned from the Expo site and pets are not admitted.

Stimulation



China's economic rise over the three decades of Reform and Opening represents by far the most significant event in recent world history, and the staging of the 2008 Olympic Games in Beijing marked a threshold in the international, public acknowledgement of this fact. While the symbolic importance of the Olympics, as the world's greatest sporting gala, is difficult to overestimate, Shanghai's 2010 World Expo responds to the world's China fascination even more directly and comprehensively. In the first place, the Expo's economic, technological, and cultural agenda is obviously aligned with the major issues and discussion topics that naturally accompany a profound shift in the order of the world. In addition, the universally recognized status of Shanghai as a cosmopolitan gateway city, in combination with the long duration of the event and the peculiarly intense, sustained character of international participation, sets the stage for a deep and broad engagement, rather than a brief – if thrilling – encounter.

China's rise is a primarily economic phenomenon. Divergent growth rates, which have steadily tilted the world's center of economic gravity towards emerging economies in general, and developing East Asia in particular, have been accentuated by the international financial crisis. In 2010, emerging economies were forecast to grow four times as fast as rich countries (with China growing more than seven times as fast). China achieved growth of over 9% in 2009, when most rich economies were shrinking. In 2010, China's GDP expansion is expected to reach 11%.

China's strong and robust economic growth attracts rising inward investment, which is in turn accompanied by general interest, spreading from overseas economic elites to the wider public, and from relatively narrow economic considerations to a broader cultural, social and political fascination. Levels of foreign media, academic and tourist interest in China have never been higher, and Mandarin learning in schools throughout the world is rising at an exponential rate. World Expo 2010, hosted in mainland China's most open and accessible city, smoothly accomodates this flood tide of attention.

Haibao Superstar

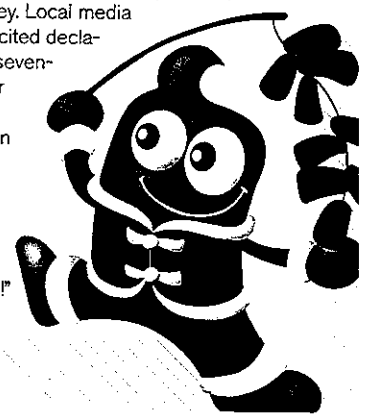
Haibao, the mascot and personification of World Expo 2010 Shanghai, was unveiled on December 18, 2007. Hai (海), the Chinese word for 'sea', is deeply associated with Shanghai (上海) and often stands as an abbreviation for the city, for instance in reference to its distinctive haipai culture (typically contrasted to the jingpai of Beijing). Haibao, literally 'treasure of the sea', can clearly be understood as a moniker for a city that has prospered through maritime commerce and trans-oceanic influences. The name is intended to be memorable, auspicious and friendly.

Haibao's shape echoes the the Chinese character ren (人) meaning person or people, formed by the ascending convergence of two strokes that symbolize advance through cooperation. As befits his merman name, he has a sea-blue skin tone, a wave in his hair, and distinctively paddle-like hands.

As the Expo date approached, Haibao became ubiquitous throughout Shanghai, omnipresent on posters, and incarnated as statuary, topiary and toys – appearing even on bank cards. After traveling the country and the world as an Expo ambassador, his glorious career soared to new heights when he became the hero of 'Coming Haibao', a 52-episiode cartoon series.

Haibao's TV role fleshed him out as a bright, open and mischievous seven-year-old boy-creature from the sea, with size- and shape-shifting magical powers, including the capability to transform into robot. By drinking plenty of water, combined with regular baths, he preserves himself from dehydration. Together with his best friend Bei Bei (a five-year-old girl), Haibao strives to protect the Shanghai-like Rainbow City from the depredations of the villainous invader Chou Chou. He lives in a Shanghai-style longtang (lane community) in the shadow of iconic Shanghai architectural landmarks, snacking on xiaolongbao. Expo references pepper the series. The creators of Coming Haibao say it humanizes a figure who had previously been envisaged as 'an almighty god'. At the time of writing a movie was under discussion.

Less admirably, Haibao has triggered his own crime wave. Trade in fake Haibao dolls has been rampant, with the counterfeits selling for RMB 15 (less than a sixth of the standardized official price), although the illicit industry has not necessarily saved parents any money. Local media quoted the excited declaration of one seven-year-old visitor from Zhejiang Province: "I can buy six different kinds of fake Haibao dolls for the price of an authentic one!"



For Shanghai, a city exceptionally exposed to world economic conditions and trade disruption, the timing of the Expo has been highly opportune. Momentarily relieved from the fears of overheating that have been a near-constant companion of the turbo-charged Shanghai economy, it found itself ideally positioned to absorb the massive jolt of stimulation provided by Expo preparation, from new and accelerated infrastructure projects, event operations, and tourism. Rather than slumping into despond as export- and expat-oriented businesses struggled, Shanghai resounded to the racket of jack-hammers as it became an enormous building site. Municipal investments in Expo-related road and tracked transport contruction and maintenance alone were budgeted at US$14 billion, with a further

US$4.2 billion devoted to construction and operation of the Expo site. Total Expo tourist revenues are likely to exceed US$20 billion. Due to the overcast economic climate of the times, an event that might have been stressfully over-exciting under normal conditions was transformed into something unambiguously therapeutic.

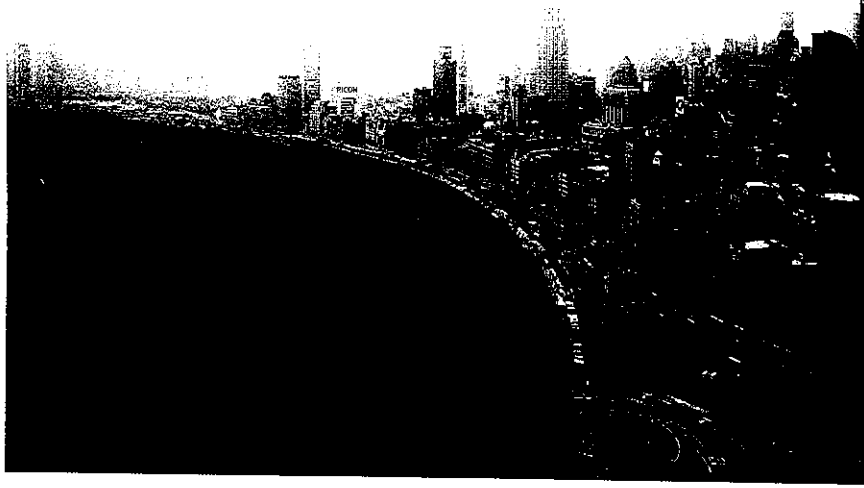
The world's troubled economic times have also underscored the conceptual relevance of the Expo to Shanghai, by emphasizing the importance of industrial restructuring. As rising prosperity, environmental standards, and competition have undermined the viability of basic assembly-line industries in the city and its neighborhood, the local economy has progressively migrated into the specialized, high-margin, advanced services and manufacturing sectors that better suit its global interconnectedness, affluent and highly-educated workforce, soaring real estate values and environmental goals. The darkening clouds over the international trade arena lent new urgency to this transition, whilst further reinforcing the identification between Shanghai and the Expo, based upon a shared embrace of continual industrial revolution and its contemporary expression in the information-rich, technologically-sophisticated, and environmentally sensitive economic activities that define the near future.

For a world enthralled by the Chinese development miracle, the geographical location, timing, theme, and topics of the 2010 Expo are further dramatized by the sheer scale of the event. Ever since the first European merchant sought to add an inch to the shirt-tails of a hundred million elusive 'Chinese consumers', the mesmerizing China-factor has been associated with raw enormity. Reckoned by civilizational longevity, geographical area, or (above all) population, China's vastness has served as a multiplier in every calculation about the country, contributing the mass that combines with developmental velocity to produce momentum (and historical impact). Among the swelling semi-popular literature explaining the rise of China to Western readers, no work is complete without a stream of graphs, figures and statistics designed to communicate the scarcely-graspable – and perhaps simply incomprehensible – scale of the process.

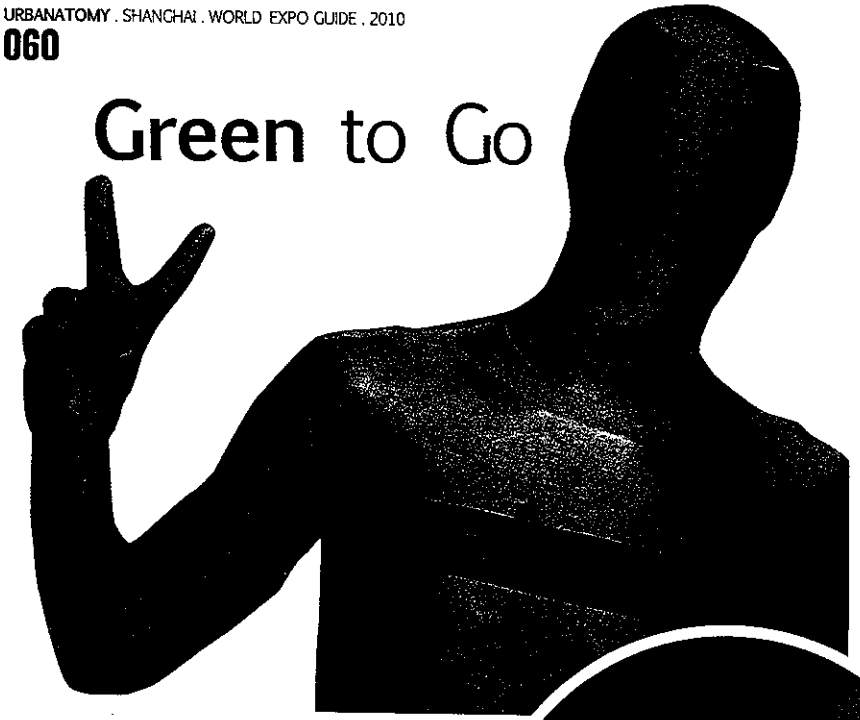
To be overawed by exorbitant magnitudes is an experience Western romantic aesthetes of the mid-19th century described as 'sublime'. During the era of its colossal hegemony, perceptions of American power were not lacking in this quality – a morally-neutral sense of overwhelming size, scope and energy that extends from megadeath and moonlandings to movies and McDonalds (continuing into trade and budget deficits). Yet no country on earth evokes the experience of sublimity as consistently as China, and nowhere else has it been so deliberately crafted as an artistic competence. World Expo 2010 manifests it with appropriate extravagance.

Staged in the world's most sublime city, the 2010 World Expo exhausts superlatives. Set in the most populous city in the world's most populous country, it is the most expensive Expo in history, covering the largest area, atrracting the most participants, and drawing the largest number of visitors. The number of participating countries and organizations (over 250 in total), exceeds the previous record by over 50%. Anticipated visitor numbers, estimated very conservatively at 70 million, modestly exceed the previous record of 65 million (set in Osaka, 1970), but more realistic expectations are again roughly 50% higher – to quote Shanghai Mayor Han Zheng (January 22, 2010): "It seems that our 70 million visitors projection is rather conservative ... The real figure may go far beyond that projection, as 20 million tickets have already been sold and the fair is still about three months away." Foreign commentators have been less cautious, confidently predicting 100 million visitors (as US Foreign Secretary Hillary Clinton has done). In 2010, Expo records are not only being broken, they are being shattered.

In 2010 the Expo is undergoing a renaissance, and in being reborn it is recovering the exuberance of its classical age, when advance through excess was the mainstream of Expo tradition. If such perfect complicity between radical innovation and profound conservatism appears contradictory, it is only superficially so, since it characterizes every renaissance, whether that of 15th-century Europe or late-20th century China. It is the natural state of an event dedicated to perpetual industrial revolution, and therefore of the Expo as a vitally evolving institution, as well as of Shanghai, a dynamic metropolis whose most precious heritage is modernity, and whose very nostalgia – dressed in Art Deco dreams – is already futuristic. In returning to tomorrow, Shanghai and the World Expo are jointly rediscovering their roots. ✖



Green to Go



Over the course of recent decades, environmentalism has grown into a dominating aspect of the Expo agenda (see pp.36-41). In this area, too, the 2010 World Expo sets new records, for the volume and consistency of its green message, for the practical application of green technology, and for the saturation of green themes into its various urbanistic, economic and technological exhibitions. This is in no small part due to the special position of China, a country where developmental advances and environmental challenges coexist in unique tension. In China, the world sees its environmental problems and solutions exhibited with exemplary vividness.

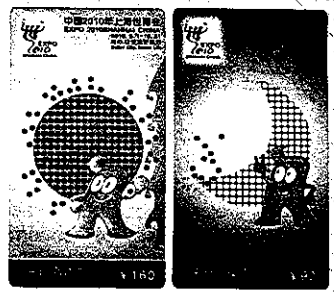
By the end of the 20th century, following two decades of extremely rapid economic growth, China's dream of industrial modernization had been transformed into an established fact, and the environmental consequences of this achievement were quickly coming into focus. Energy consumption was a special concern, sparking alarm over energy security and environmental deterioration. Despite comparatively highly-developed hydro resources, coal still accounted for close to 80% of the country's electricity, resulting in severe particulate atmospheric pollution and carbon emissions that extorted a cruel toll from the nation's lungs and in its hazardous mining industry. Global warming projections were particularly menacing given the country's exceptional vulnerability to desertification and rising sea levels.

Since the beginning of the new millennium, the Chinese government has strongly committed to advanced energy technology, prioritizing research, development, and

The Tickets that Exploded

Admission tickets for World Expo 2010 Shanghai are divided into nine basic categories. Peak Day Single Day Admission tickets cover peak periods include the first three days of the event (May 1-3), China's National Day holiday (Oct 1-7) and the final week of the Expo (Oct 25-31). There are four types of Standard Day tickets (which exclude Peak Days): Single Day Admission, Three Day Admission, Seven Day Admission and Evening Admission (after 5pm). Group Admission tickets are available for parties of 15 people or more, and Student Group Admission tickets for parties of no less than 30 students. Both Peak Day and Standard Day Special Admission tickets are available at a discounted price for the disabled; seniors (born in or before 1950); students; children (above 1.2m); and Chinese military personnel on active duty. Presentation of a valid ID is required when purchasing a Special Admission ticket and for use of the ticket to enter the Expo site. In all cases, a maximum of one entrance is permitted each day. Children shorter than 1.2m can enter for free.

Ticket sales were organized in four phases., with steadily declining discounts. The 1st Phase lasted from March 27 to June 30, 2009, the 2nd from July 1 to December 29, 2009, and the 3rd covered early 2010, prior to the opening of the Expo (December 30, 2009 to April 30, 2010). During the 4th Phase of ticket sales, coinciding with the Expo event (May 1 to October 31, 2010), prices settled to their final – undiscounted – levels: Peak Day Single Day Admission (RMB 200), Peak Day Special Admission (RMB 120), Standard Day Single Day Admission (RMB 160), Standard Day Special Admission (RMB 100), Three Day Admission (RMB 400), Seven Day Admission (RMB 900), and Evening Admission (RMB 90).

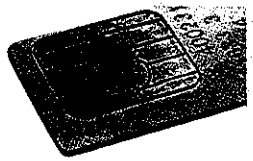


Within China, tickets could be purchased from over 5,300 outlets, belonging to four main ticket agents: the Bank of Communications, China Post, China Mobile, and China Telecom. Outside China, 15 foreign agents distributed tickets across 18 countries. Group tickets were distributed through authorized travel agents, bundled with tour packages. Ticket enquiries can be made through the Expo Shanghai hotline (962010).

Over 12 million tickets had been sold by mid-December 2009, comfortably exceeding expectations of 10 million sales by the end of the year (and 20 million prior to the Expo opening). Over 55% of ticket sales were bought by people in the Yangzi Delta Region, with 20% sold in Shanghai.

Phoning In

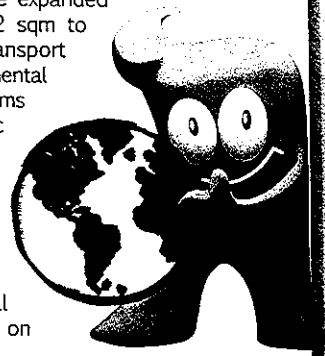
The mobile telephony and RFID (radio frequency identification) technologies starring at the 2010 Expo were able to demonstrate their potential to visitors even before their entry to the site. In a cooperative venture with the Shanghai World Expo Bureau, China Mobile introduced a modified (RFID capable) SIM card for cell phones in November 2009, supporting wireless cash transfer and swipe technology for electronic admission tickets and purchases from Expo dining and retail venues. The electronic tickets were priced identically to the paper originals.



The SIM cards have been manufactured by Jiangsu Changjiang Electronics Technology Company (JCET) of Jiangyin, Jiangsu province, who began a production run of 3 million units in November 2009. The company was prepared to ramp up production into the tens of millions, if justified by market response.

installation of hydro, wind, solar, and nuclear power. Wind-power capacity in the country has been massively expanded and a solar industry built from scratch to become the world's largest (by production volume), while clean coal (gassification) technology, household solar water heaters, and energy-efficient lighting have been vigorously pursued. Prior to the Copenhagen climate conference, it declared plans to produce 15% of its energy from renewable sources by 2020, while reducing the energy intensity of economic activities by 40-45%.

While Chinese industrialization was attended by enormous environmental problems, rising prosperity brought remedies within reach. In the country's increasingly affluent coastal city's, a variety of environmental indicators improved remarkably. Since the turn of the millennium, Shanghai's air and water quality have been steadily raised, its waterways cleaned, and green space expanded (from 20% to 38% of the urban area, and from 3.62 sqm to 12.5 sqm per capita). Development of the city's transport infrastructure has been guided by long-term environmental considerations, emphasizing tracked mass-transit systems and the phased introduction of low-emissions public road vehicles. In addition, the importance of heritage preservation has risen to become a central guideline of urban reconstruction. Recent professional polling shows that 87% of Shanghai residents acknowledge a clear improvement in environment quality.



Since winning the Expo bid in 2002, Shanghai has launched a succession of three-year environmental action plans, investing roughly 3% of the city's GDP on

Shanghai's Green Report Card

The United Nations Environment Programme (UNEP), under executive director Achim Steiner, drew up a report on the environmental dimension of Shanghai's 2010 World Expo preparations. The report, released in August 2009, evaluated the city's efforts in regards to air and water quality, solid waste treatment, green coverage and protected areas, transportation, energy, climate neutrality, the Expo site, and public participation.

The conclusions were broadly positive. The city's air quality was judged good for 328 days in the year 2008, an increase of 68% over five years. Further steps were seen as necessary to tackle nitrification of the local waterways. Improvements were recommended in solid waste treatment, which was overly dependent upon landfill and mechanical-biological treatment plants. The report also advocated continued efforts to substitute renewable energy for coal.

The city's transport initiatives were strongly commended and described as a uniquely impressive "green transport model," and the overall preparations praised as a "glimpse of greener future" that would "leave a green legacy for the citizens of Shanghai and contribute to worldwide initiatives." In releasing the report, Steiner expressed hopes that the city would "turn its modernization into a green example for urban development of the future."

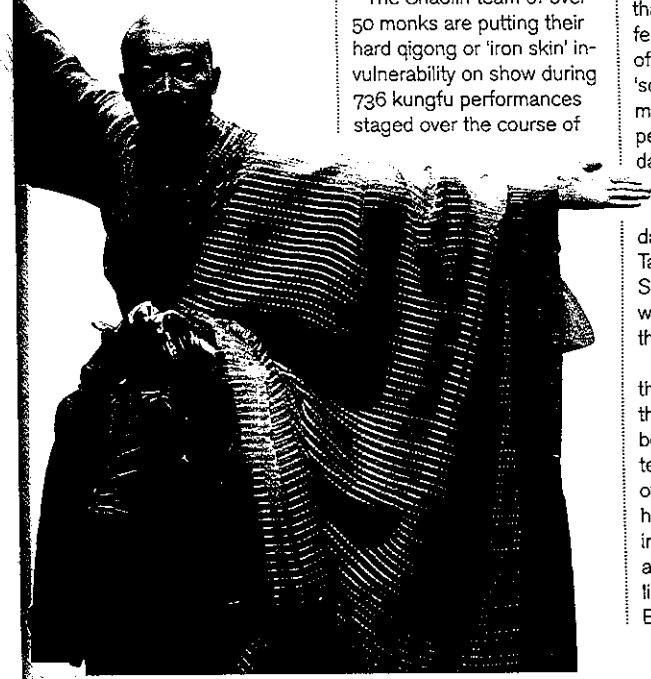
Together with the UNEP, Shanghai has drawn up a Green Expo Guidebook to advise visitors and residents on eco-friendly behavior. A follow-up UNEP was scheduled for release after the Expo ends.

Double Impact

太极

China's traditional martial arts have been among the country's most successful cultural exports and Expo 2010 provides an ideal opportunity to deepen their connection with a fascinated international audience. Two of China's most respected kungfu institutions have despatched full teams to the event, to entertain and educate visitors through free public performances that demonstrate the distinct skills mastered within the Shaolin (Zen Buddhist) and Wudang (Taoist) schools. In October 2009, both Shi Yongxin, Principal Abbot of the Shaolin Monastery in Henan Province, and Li Guangfu, President of the Wudang Mountain Taoist Association, based in Wudang Temple in Hubei Province, committed their schools to participation in the 2010 Expo, adding an unprecedented dimension to the event.

The Shaolin team of over 50 monks are putting their hard qigong or 'iron skin' invulnerability on show during 736 kungfu performances staged over the course of the Expo, an average of four each day. The 45-minute show, entitled Shaolin Temple: Saga of the Warriors Monks, combines live and multimedia elements to demonstrate the '72 Skills of Shaolin' that have become an international legend through classic Hong Kong kungfu movies. Employing martial artists from China, Australia and Germany, it tells a story about the education of young Shaolin monks, in a four act drama that reflects the seasons of the year. English-speaking monks are on hand to explain the incredible feats to visitors.



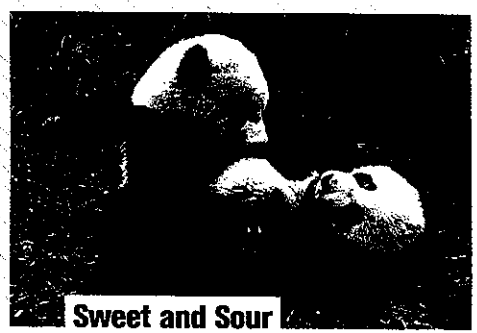
The Wudang Taoists, represented by a team of 60 adepts, have come to the Expo to demonstrate their qinggong or 'light body skills' that enable gravity-defying feats and the overcoming of massive attacks through 'soft power'. Their 30-minute martial art stage show, performed three times each day, is entitled Wudang: Taiji Taoism. It tells the story of Zhang Sanfeng, legendary founder of the Wudang Taoist Temple during the Song Dynasty (960-1279), who attained immortality through his mastery of Taiji.

To dramatically illustrate the differences between their techniques, hopes have been raised that the two teams may 'fight for mastery of the Expo'. Both agree, however, that their dynamic interpretations of harmony and contributions to healthy living fit perfectly with the Expo theme.

green projects over the period (for a total exceeding RMB 225 billion, or US$33 billion). The Expo theme of 'Better city, better life', with its obvious environmental connotations, was made a discussion topic in the city's schools, and public campaigns were launched to encourage environmentally-conscious individual behavior, from rubbish classification and reduction in the usage of plastic shopping bags, to economical usage of water and air conditioning. These initiatives have been coordinated with the United Nations Environmental Programme (see p.62).

The Expo site itself has been planned as an environmental show case, with the aim of closely matching green messages to applications of advanced green technologies. Sustainability and heritage protection were adopted as governing criteria during the process of construction, favoring eco-friendly materials. The major structures incorporate equipment for solar and geothermal energy generation, river-water thermal conduction, and rainwater collection and purification, with total solar power capacity of the Expo Park is estimated at 4.7 megawatts (see p.37). The most visually arresting green innovation has been erected along the Expo Boulevard's 'Sun Valley', where six giant funnels swallow sunlight and rainfall for the lower levels of the structure (see p.233). Power-saving lighting based on LED (light emitting diode) systems have been widely employed. Transport operations at the site have been treated as a test-bed for zero-emissions vehicle technologies, demonstrated in a mixed fleet of buses and buggies (see p.38).

Expo participants have aligned themselves enthusiastically with the green agenda, competing to establish national and corporate brand-building credentials through environmentally sensitive processes, technologies, and messages. Among the national pavilions, in particular, attention to green concerns has been a universal feature, foregrounded in building designs, exhibitions, themes, and public relations (see pp.236-7). ✱



Sweet and Sour

A group of the giant pandas that serve as China's most charismatic ambassadors arrived in Shanghai on January 5, accompanied by memories of the catastrophic tragedy that befell their home province of Sichuan less than two years before. All ten pandas were born in the Wolong Giant Panda Reserve Center, Sichuan, after the devastating earthquake of May 2008, providing a black-and-white image of recovery and new life.

After a period of quarantine, the pandas were introduced to the public in their 180-sqm enclosure at Shanghai Zoo on January 20, greeted by 100 local and international media representatives. Worries that they might reject Shanghai cuisine proved unfounded as they munched through a daily diet of 10 kilograms of local bamboo, grown on Sheshan, in the city's Songjiang District, supplemented by a nutritious cake made from milk powder, ground wheat and soybean meal (following a recipe devised in Wolong). Their stay in Shanghai has been divided between the city zoo and its suburban wildlife park.

Called to Serve

Described by Premier Wen Jiabao as the answer to a century-long national dream, World Expo 2010 has generated extraordinary enthusiasm throughout the entire spectrum of society, from senior leaders to local university students and the public at large. It is not surprising, therefore, that volunteer support for the event has reached previously unimagined levels, with over 600,000 helpers picked from among millions of applicants to assist visitors in various roles.

Most of the volunteers are young Shanghainese (aged 16-35), and with higher educations and advanced language skills. They are reinforced by 3,000 foreigners (from over 100 countries), mostly resident in Shanghai, with competence in spoken Mandarin. Some of these volunteers have previous Expo experience (from Aichi, 2005), while others are from Milan, host city of the 2015 Expo.

Volunteers are deployed around the city and at major transportation sites. Over 70,000 work at the Expo site itself, providing information, guidance, and organizational services, as well as assistance for the physically challenged. Workloads average seven hours per day, for 14 days. At least 2,500 volunteers work on the site each weekday, and double this number serve during weekends, holidays and other peak periods.

Volunteer recruitment began in May 2009 and on March 27 (when the 400-day countdown to the opening began) Shanghai unveiled a logo, slogan and song for the Expo 2010 volunteer effort. The logo combines the Chinese character for heart (xin, 心) with the letter 'V' (for Volunteer) and a dove of peace. The slogan is the self-explanatory 'At Your Service at Expo' (with sub-slogans 'My Will, My Help, My Pleasure', '2010, We're Together As One', and 'Our City, Your Joy'). The song is 'By Your Side', written specially for the event.

Beyond the Shanghai volunteer program, national pavilions have recruited their own teams of assitants, following a variety of different policies on qualifications, remuneration, work hours, and dress.

EXPO 2010 Volunteer

Memories of the **Future**

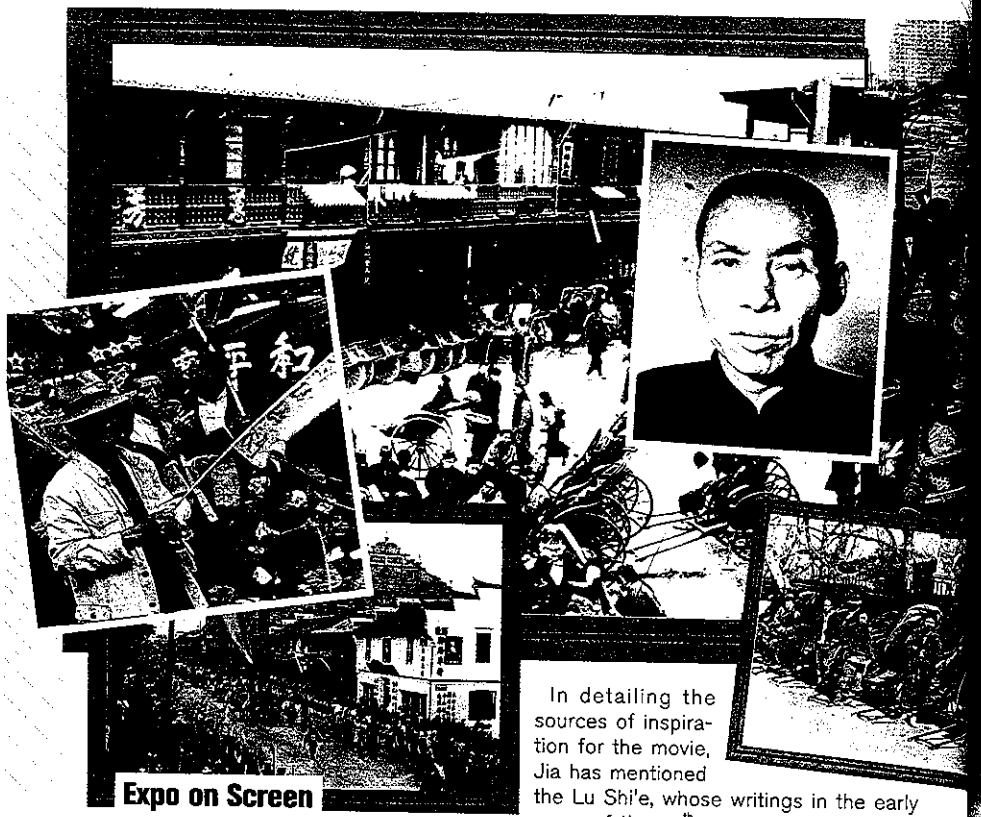
World Expo 2010 Shanghai has been pre-programmed for historical greatness. It is possible that no previous Expo has reflected changes of such extraordinary magnitude, from the rise of a truly globalized world economy, epitomized by the renaissance of Asia, of China, and of Shanghai, to the watershed urbanization of the planet, the emergence of a wireless infosphere, and the lucid recognition of global environmental crisis (along with its attendant techno-industrial opportunities). Traditional Chinese prudence might warn against the excitement of 'interesting times', but such times are certainly upon us, and World Expo 2010 is thoroughly transfixed by them.

For the World Expo as an institution, the 2010 event offers the possibility of decisive transformation. A creature of the Eurocentric industrial revolution that gave birth to the modern world, Expo has expressed in turn an electrifying confidence in progress, and a battered, guilt-ravaged weariness. Its international public prestige has risen and fallen with the fortunes of Modernity 1.0, and its self-estimation has shifted accordingly. After dazzling the late 19th century world as a catalyst for radical modernization, universal in its relevance and invincible in its optimism, by the late 20th century it had retreated into a marginalized, niche event, of major interest to the host country alone, bypassed by the main currents of business and technological advance, its audience stripped-away by sporting events, its spirit darkened by social and environmental anxieties, its institutional fabric resigned to the management of irresistable decline.

The choice of Shanghai as the host city for the 2010 Expo marks the symbolic passage to a second, regenerated modernity. Modernity 2.0 no longer radiates out of Europe, or any other unique center. It sprouts from intense hubs scattered around the earth, networked by increasingly intelligent information systems, sustained by mobile, hybrid populations. Like Modernity 1.0, it thrives on free-market commerce and technological innovation. Indeed, it has fused the two in previously unanticipated ways, through decentralized intelligence and communications systems that function as market places and computerized economic institutions that tend towards artificial intelligence. Unlike Modernity 1.0, however, it has an aversion to ethnic or doctrinal rigidities, and accomodates itself flexibly to the widest practical variety of cultural, social, and political norms, traditions, and agendas. It is suspicious of missionary zeal, supremely pragmatic in approach, resilient in its uncertainty, and open to experimentation.

The global vitality of Modernity 2.0 has already demonstrated itself convincingly. In contrast to Modernity 1.0, which was terminally crippled by the Great Depression of the 1930s, Modernity 2.0 has been only further invigorated by the world financial crisis of recent times. That Modernity 2.0 will have been seen to dominate the 2010 World Expo also seems inevitable: Shanghai is among it principal international hubs, it has a specially intimate relationship with the fate of world cities (and new urbanism in general), the economic, technological, and environmental exhibitions are almost perfectly adapted to it, and the reborn world that identifies with it is the Expo's true object of celebration.

The genuinely unsettled question concerns the Expo as an institution. Is the continuing series of events open to radical rejuvenation and re-invigoration, as the festival of a reborn history, in which worldwide modernization has decisively liberated itself from the contingencies, impediments, and ghosts of its past? World Expo 2010 might not be able to conclusively resolve this question, but by carrying the event to a dramatically new level of accomplishment, it will have done everything realistically possible to ensure a positive answer. ✖



Expo on Screen

Ever since the first moving pictures were displayed at the Parisian World Expos of the late 19th century, the history of cinema has been intimately connected with the spectacle, artistic panache, and technological adventurousness of the great World Fairs. World Expo 2010 adds an exceptionally rich episode to this story, and seems certain to be the most thoroughly cinematically documented Expo to date.

Among the most keenly anticipated movie contributions is 'Shanghai Legend' (上海傳奇), by Chinese star director Jia Zhangke. The two-hour film takes its cue from the Expo theme 'Better City, Better Life' and devotes itself to an exploration of Shanghai architecture and urban culture, merging fact and fiction in a style comparable to his acclaimed '24 City'. Interviews with Shanghai emigrants have been shot in Hong Kong, Taipei and New York.

In detailing the sources of inspiration for the movie, Jia has mentioned the Lu Shi'e, whose writings in the early years of the 20th century anticipated the future development of Shanghai with uncanny accuracy, including even the hosting of a World Expo. Such prescience, Jia suggested, meant that "Shanghai might be one of the only cities that has actually achieved its own dreams."

Backing for the project is provided jointly by the Shanghai Film Group Corporation, Jia's Xstream Films, and two Beijing-based media investment companies. Eye-strain problems affecting the overworked director have led to some schedule slippage with the project.

Zhou Bing's 90-minute docudrama 'The Bund' uses similar narrative techniques, melding factual and fictional elements, to follow the rise of the Bund from a muddy riverbank to a global economic hub and icon of prosperous modernity during the 1920s and '30s. The film places the area's extraordinary architectural heritage in social and historical context, illuminated by the lives of prominent individuals, including singer and actress Zhou Xuan, novelist Eileen Chang, gangster supremo Du Yuesheng, and customs reformer Robert Hart. Glossing the story, Zhou notes: "Formerly a shallow waterfront covered with reeds, the Bund has witnessed the city's great transformation and evolution to a global financial and commercial center over the past century."

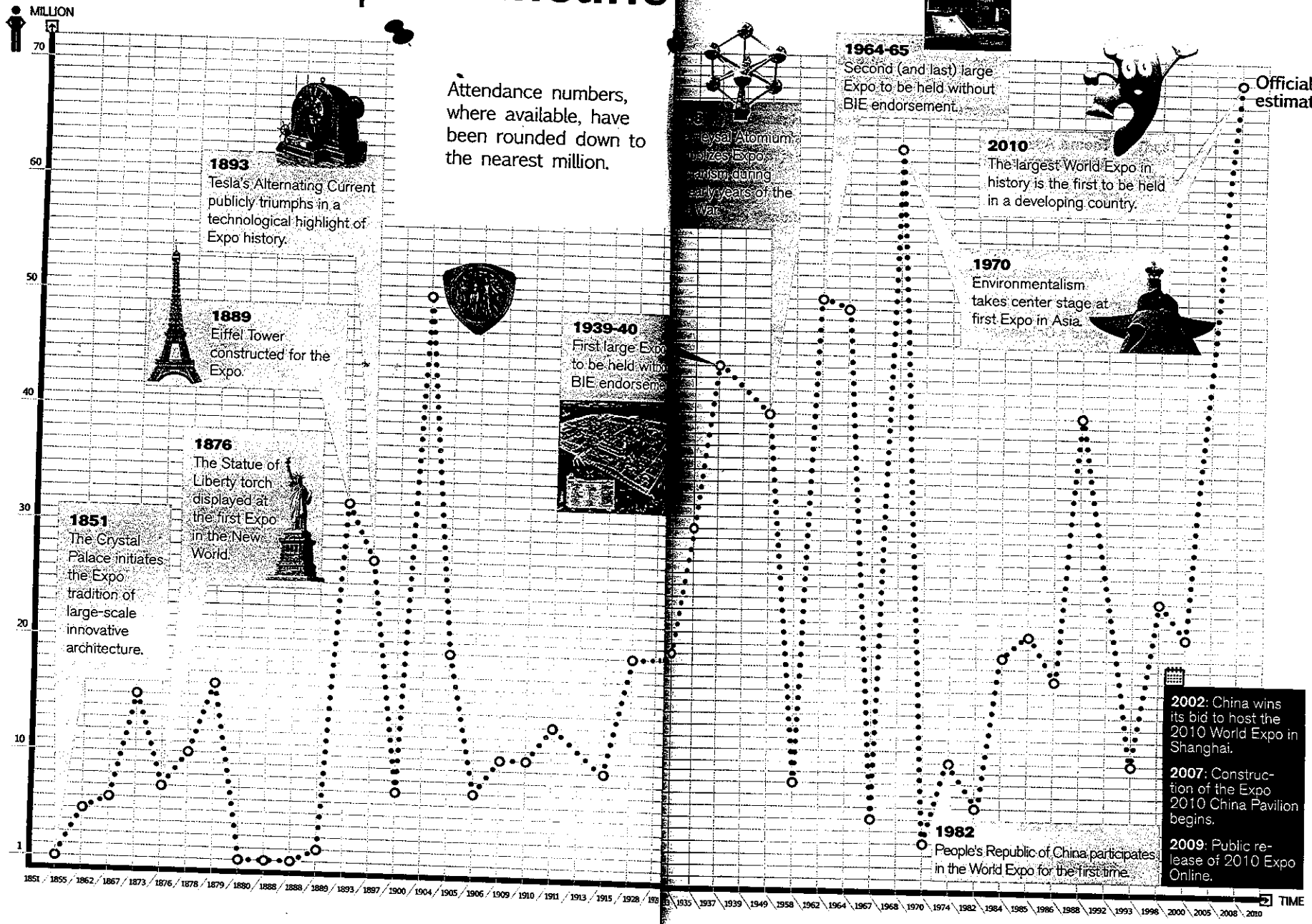
The film has been based on extensive research in archives around the world, and makes use of rarely seen footage from the early 20th century. It has been supported by the Shanghai Media Group, and accompanied by a five-episode TV documentary series on the same topic. Bilingual scripts (in Chinese and English), along with the usage of 3D technology, pre-adapt the movie to a demanding international audience.

A geographically wider-angle view of Chinese urbanization, focusing on recent decades, can be seen in Lu Chuan's eight-minute 'Beautiful Progress' (Mei De Li Cheng), screened in a cinema at the top of China Pavilion, where it serves as a theme film. The short movie casts a poetic light on the changes to Chinese cities subsequent to Reform and Opening (from December 1978), as seen through the eyes of a father and son.

Another eight 30-minute documentary films have been produced by the 'Vision Shanghai' project (modeled on 'Vision Beijing', which recruited five top international directors to document the Beijing Olympics on film). The half-hour movies were supported by a collaborative venture between the Shanghai World Expo Land Holding Company and the Shanghai Film Group, and cover various aspects of World Expo preparation and Shanghai life.

World Expo Timeline

Attendance numbers, where available, have been rounded down to the nearest million.



1851
The Crystal Palace initiates the Expo tradition of large-scale innovative architecture.

1876
The Statue of Liberty torch displayed at the first Expo in the New World.

1889
Eiffel Tower constructed for the Expo.

1893
Tesla's Alternating Current publicly triumphs in a technological highlight of Expo history.

1939-40
First large Expo to be held without BIE endorsement.

1964-65
Second (and last) large Expo to be held without BIE endorsement.

1970
Environmentalism takes center stage at first Expo in Asia.

1982
People's Republic of China participates in the World Expo for the first time.

2010
The largest World Expo in history is the first to be held in a developing country.

2002: China wins its bid to host the 2010 World Expo in Shanghai.

2007: Construction of the Expo 2010 China Pavilion begins.

2009: Public release of 2010 Expo Online.

1851
The Great Exhibition, London (Britain)
Theme: Industry of all Nations
Attendance: 6 million

1855
Paris International, Paris (France)
Theme: Agriculture, Industry and Art
Attendance: 5 million

1862
International, London (Britain)
Theme: Industry and Arts
Attendance: 6 million

1867
Paris International, Paris (France)
Theme: Agriculture, Industry and Arts
Attendance: 15 million

1873
Austrian International, Vienna (Austria-Hungary)
Theme: Culture and Education
Attendance: 7 million

1876
Centennial Exposition, Philadelphia (USA)
Theme: American Independence
Attendance: 10 million

1878
Paris International, Paris (France)
Theme: Agriculture, Arts and Industry
Attendance: 16 million

1879-80
Sydney International, Sydney (Australia)
Theme: Agriculture, Arts and Industry
Attendance: 1 million

1880
Melbourne International, Melbourne (Australia)
Theme: Arts, Manufacturing, Agriculture and Industry
Attendance: 1 million

1888
Melbourne Centennial (Australia) Melbourne
Theme: Arts, Manufacturing, Agriculture and Industry
Attendance: 1 million

1888
Barcelona International, Barcelona (Spain)
Theme: Arts and Industry
Attendance: 2 million

1889
Paris International, Paris (France)
Theme: French Revolution
Attendance: 32 million

1893
World's Columbian, Chicago (USA)
Theme: Discovery of America
Attendance: 27 million

1897
Brussels International, Brussels (Belgium)
Theme: Automobiles
Attendance: 7 million

1900
Paris International, Paris (France)
Theme: Evaluation of a Century
Attendance: 50 million

1904
Louisiana Purchase, St. Louis (USA)
Theme: Louisiana Purchase
Attendance: 19 million

1905
Liège International, Liège (Belgium)
Theme: Belgian Independence
Attendance: 7 million

1906
Milan International, Milan (Italy)
Theme: Transport
Attendance: 10 million

1909
Alaska-Yukon-Pacific Exposition, Seattle (USA)
Theme: Development of the Pacific Northwest
Attendance: 10 million

1910
Brussels International, Brussels (Belgium)
Theme: Industries
Attendance: 13 million

1911
Turin International, Turin (Italy)

1913
Ghent International, Ghent (Belgium)
Attendance: 9 million

1915
Panama-Pacific, San Francisco (USA)
Theme: Inauguration of the Panama Canal
Attendance: 19 million

1928
Bureau of International Exhibitions formally established at the Paris Convention.

1929-30
Ibero-American Exhibition, Seville (Spain)

1929-30
Barcelona International, Barcelona (Spain)
Theme: Arts and Industry

1933
Century of Progress, Chicago (USA)
Theme: A Century of Progress
Attendance: 48 million

1935
Brussels International, Brussels (Belgium)
Theme: Transport, Colonisation
Attendance: 20 million

1937
Paris International, Paris (France)
Theme: Arts and Technology in Modern Life
Attendance: 31 million

1939-40
New York World's Fair, New York (USA)
Theme: Building The World of Tomorrow
Attendance: 45 million

1949
Port-au-Prince International, Port-au-Prince (Haiti)
Theme: Foundation of Port-au-Prince

1958
Brussels World's Fair, Brussels (Belgium)
Theme: A More Human world
Attendance: 41 million

1962
Century 21 Exposition, Seattle (USA)
Theme: Man in the Space Age
Attendance: 9 million

1964-65
New York World's Fair, New York
Theme: Man's Achievement on a Shrinking Globe in an Expanding Universe
Attendance: 51 million

1967
Expo '67, Montreal (Canada)
Theme: Man and His World
Attendance: 50 million

1968
HemisFair '68, San Antonio (USA)
Theme: Confluence of Civilizations in the Americas
Attendance: 6 million

1970
Expo '70, Osaka (Japan)
Theme: Progress and Harmony for Mankind
Attendance: 64 million

1974
Expo '74, Spokane (USA)
Theme: Tomorrow's Fresh New Environment
Attendance: 4 million

1982
1982 World's Fair, Knoxville (USA)
Theme: Energy Turns the World
Attendance: 11 million

1984
1984 World's Fair, New Orleans (USA)
Theme: The Worlds of Rivers
Attendance: 7 million

1985
1985 World's Fair, Tsukuba (Japan)
Theme: Dwellings and Surroundings - Science and Technology for Man at Home
Attendance: 20 million

1986
Expo '86, Vancouver (Canada)
Theme: Transportation and Communication
Attendance: 22 million

1988
Expo '88, Brisbane (Australia)
Theme: Leisure in the Age of Technology
Attendance: 18 million

1992
Expo '92, Seville (Spain)
Theme: The Era of Discovery
Attendance: 41 million

1993
Expo '93, Daejeon (Korea)
Theme: The Challenge of a New Road of Development

1998
Expo '98, Lisbon (Portugal)
Theme: The Oceans: A Heritage for the Future
Attendance: 11 million

2000
Expo 2000, Hanover (Germany)
Theme: Humankind, Nature, Technology
Attendance: 25 million

2002
China wins its bid to host the 2010 World Expo in Shanghai.

2005
Expo 2005, Aichi (Japan)
Theme: Nature's Wisdom
Attendance: 22 million

2007
Construction of the Expo 2010 China Pavilion begins.

2008
Expo 2008, Zaragoza (Spain)
Theme: Water and Sustainable development

2009
Public release of 2010 Expo Online

2010
Expo 2010, Shanghai (China)
Theme: Better City, Better Life
Attendance: 70 million (official estimate)

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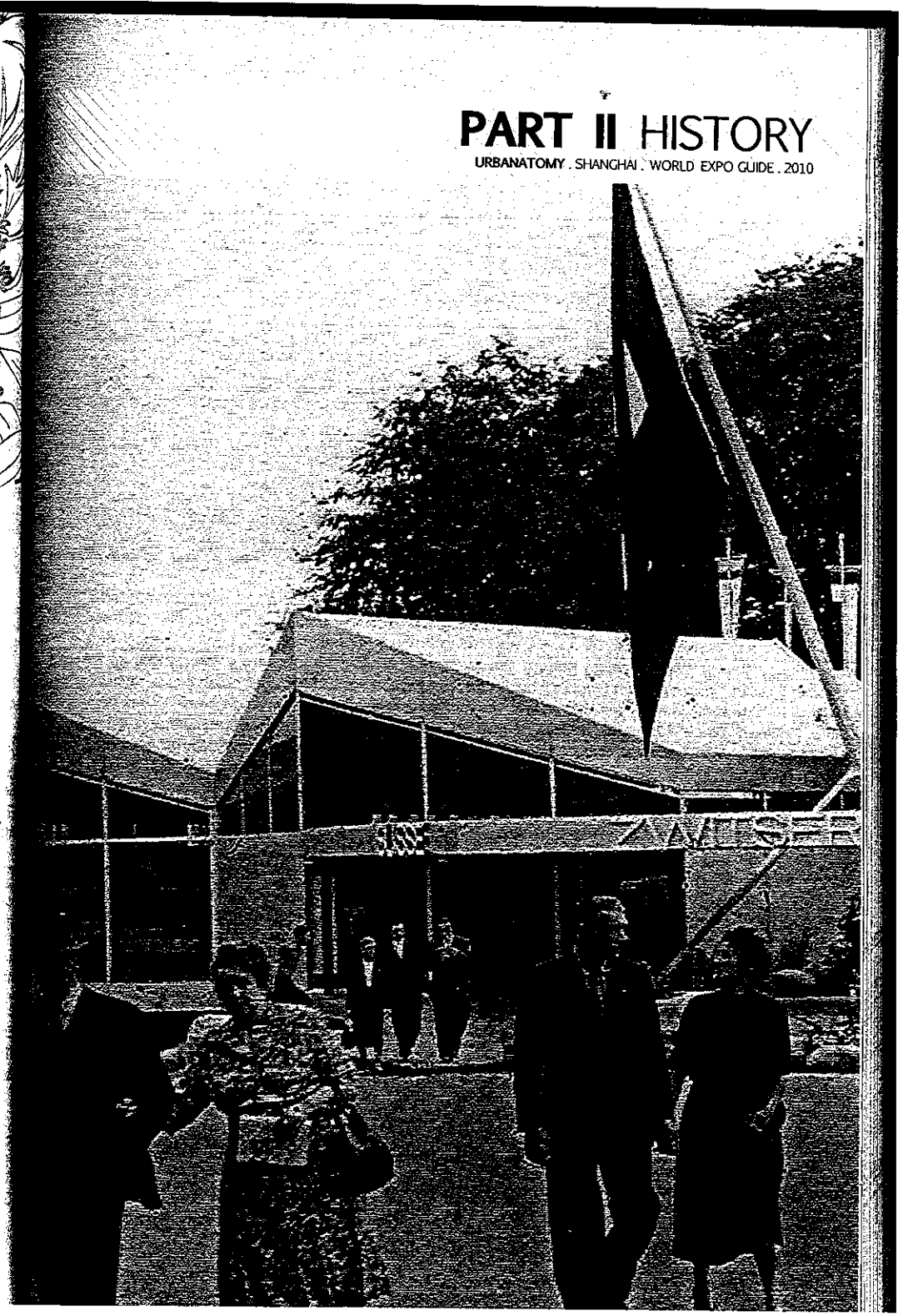
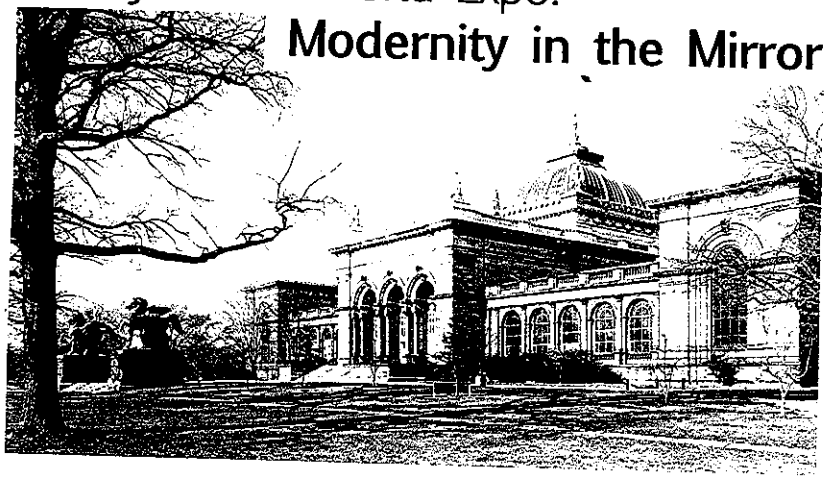


A History of the World Expo:
Modernity in the Mirror



The modern world arose unexpectedly and has always perplexed itself. Amongst the varied historical expectations of mankind's traditional cultures, modernization finds no place. Modernity's ceaseless, cumulative change defies every pre-existing pattern, abandoning stability without embracing the higher order of a great cycle or the simple destination of an eschatalogical conclusion. Although establishing something like a new normality, it departs decisively from any sort of steady state. It displays waves and rhythms, but it subsumes such cycles, rather than succumbing to them. Whilst nourishing apocalyptic speculation, it continuously complicates anticipations of an end time. It engenders a previously unanticipated mode of time and history, characterized by ever-accelerated directional transformation, whose indices are quantitative growth and qualitative innovation. The worldwide consolidation of modernity only deepens its fundamental mystery.

Bemused by itself, often thrilled, frequently appalled, modernity has searched for its own reflection in products, institutions and laws, artistic creations, philosophical works, social sciences and political movements. Nowhere has this search been more explicitly focused and extravagantly resourced than in the great World Expositions, overt festivals of modernity, that have tracked its progress since the middle of the 19th century. Anyone asking what modernity is, or what the world is becoming, finds their questions echoed refined and addressed by the World Expo.

Like the global modernity it celebrates, the World Expo came into existence before becoming self-aware. Its birthdate, however, is a matter of retrospective consensus, since London's Great Exhibition of 1851 was quickly established as the first event in a continuing series, the original exemplar of the Universal Exposition, with an institutional identity transcending its time and place.

The principles defining a Universal Exposition were not fully codified until the 20th century, but the Expo's essential characteristics – along with many typical if not strictly necessary features – were evident from the beginning. It was a six-month public event of global scope and appeal, staged in a leading international metropolis, emphasizing the material drivers of historical progress (pre-eminently commerce and technology) in a large-scale concentrated spectacle, reflected in

What is Modernity?

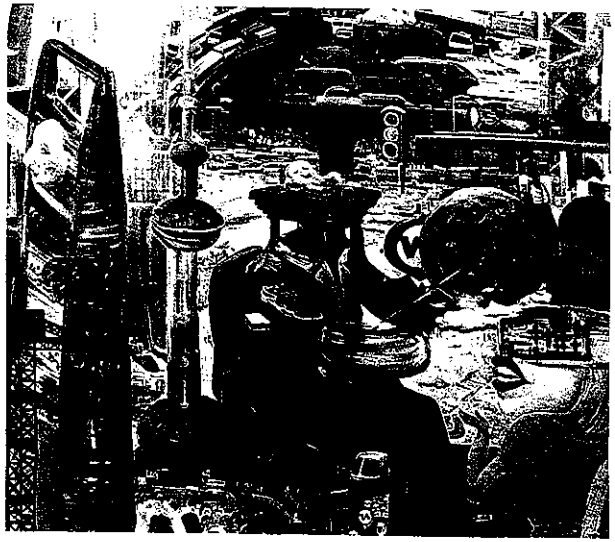
Because Modernity defines itself over against what it departs from ('traditional society') it natural to understand it as the escape from an antecedent condition. Perhaps the most compelling accounts in this vein has been produced by University of California economist Gregory Clark. After carefully martialling data from economic history, Clark is led to argue that this pre-modern world functioned in accordance with principles analysed in their essence by Thomas Malthus at the end of the 18th century.

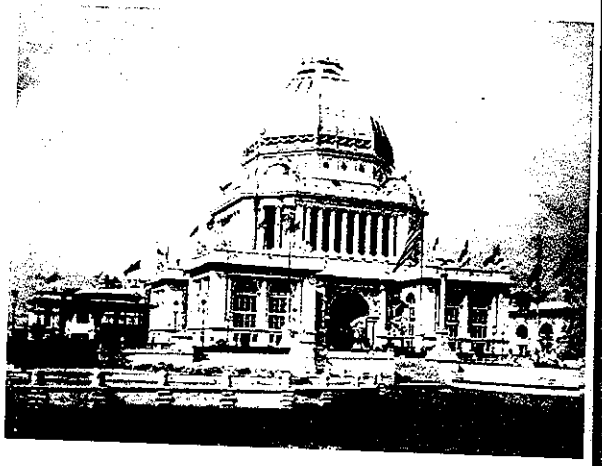
At the time Malthus was writing, average living standards worldwide were broadly comparable to (and perhaps even lower than) the level they had reached in the Stone Age. Across the eons of human 'advancement', erratically, but with brutal long-term inexorability, every improvement in productive capability had been nullified by population increase, returning the mean state of existence to that of bare subsistence (poised at the edge of starvation). Whatever ingenuity painstakingly added, fertility rapidly subtracted, so that the sum total of historical progress amounted to an increase in the world's population carrying capacity, whilst contributing nothing whatsoever to the mean material welfare of its ever more numerous human denizens.

This 'Malthusian trap' is the normal pattern of human existence, with Modernity as its sole exception. In the modern societies produced by the industrial revolution, for the first time, material improvement began to consistently outpace its demographic absorption, raising average living standards in a way that gives history a new – and rigorously objective – sense of direction.

'Progress' is a word that is easily abused, as code for a direction of development that conforms to particular moral and political agendas. Clark's work suggests that such manipulative usage, however widespread, provides insufficient reason to jetison the word entirely, or to deny the uncontroversially progressive dynamic of modernity. To progress – to modernize – is to depart from the cage of subsistence, in the direction of open-ended, cumulative abundance. Modernity is human betterment, precisely understood, and the realistic expectation of such betterment defines the cultures and societies of the modern world.

Subsistence is essentially rural, since urban life presupposes an agricultural surplus. It is only in the modern age that large cities and a consistent trend to increased urbanization have been possible. An historical and conceptual bond thus connects urban existence to improvement in the quality of life, embedding both in social modernization, through industrial revolution. This tangle of interconnections is succinctly captured by the theme of the 2010 World Expo, 'Better city, better life', which places the event firmly on the side of modernity, and in the mainstream of Expo tradition.





purpose-built monumental architecture. The dominant spirit was cosmopolitan, optimistic, urban, and practical, implicitly dedicated to the exaltation and promotion of modernity as incarnated in industrial civilization and, more specifically, in the new socio-economic order manifesting itself in the birthplace of the industrial revolution, Great Britain.

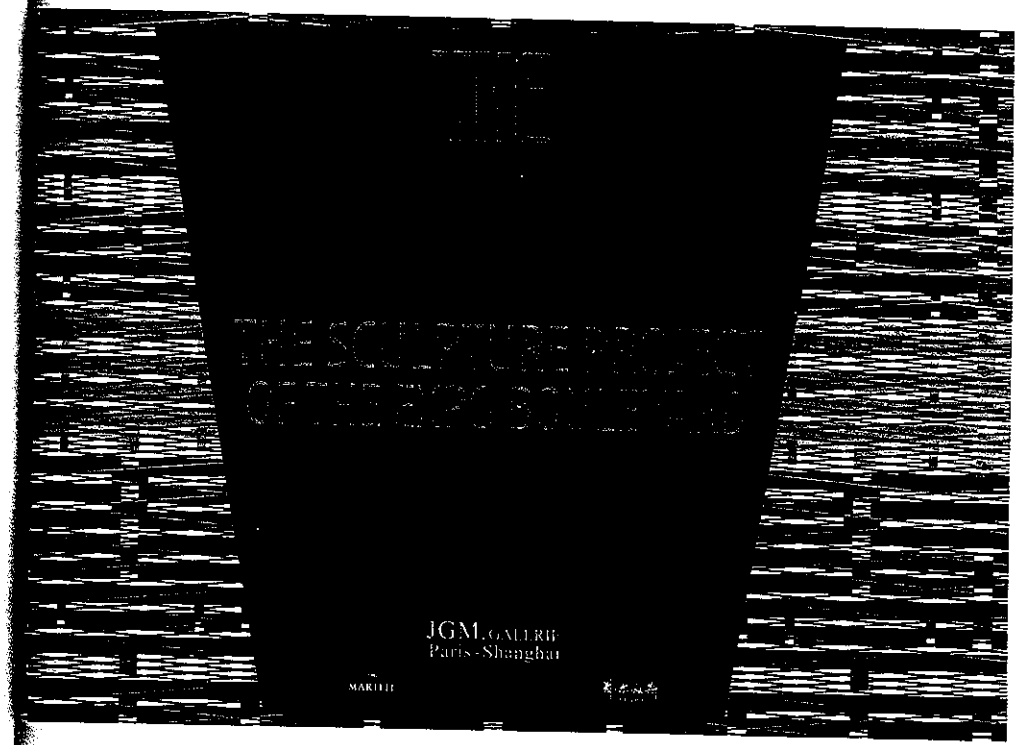
Commercial fairs had established themselves as resilient public institutions long before the Great Exhibition took place. European cities including Lyons, Frankfurt and Leipzig hosted regular fairs dating back to the 16th century, drawing traders from across the continent. But unlike the Great Exhibition, these trade fairs were basically elaborated market places, with a comparatively modest level of central organization. The cosmopolitanism of these events was a natural outgrowth of their market activity, rather than a self-reflective ideal. They had no deliberated message to deliver, no pretentions to international stature or uniqueness, and only minimal institutional self-consciousness, especially in regards to any conceptual or educational purpose. The Great Exhibition, in contrast, had a vision. It was not merely a symptom of the modern world, but also an explicit proponent.

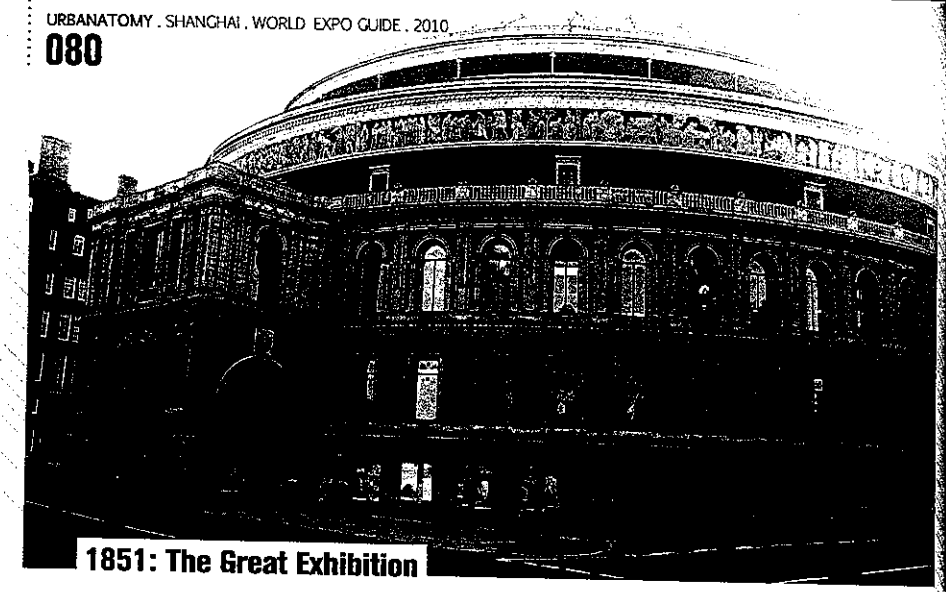
With the rise of nationalism and political economy in Europe, from the late 18th century, trade fairs were supplemented by the first industrial exhibitions, which were state-supported events designed to stimulate the technical improvement of domestic agriculture and manufacturing. Since 1756, British industrial exhibitions had been organized by the Society of Arts, but these relatively modest fairs were eclipsed by the series of large-scale French exhibitions (initiated in 1798) that climaxed in the high-profile French Industrial Exposition of 1844. Motivated by a centrally-orchestrated modernizing agenda that clearly prefigured the Great Exhibition, the exposition of 1844 was housed in a temporary display hall erected on the Champs-Élysées in Paris and inspired imitators throughout the continent. During the years 1845-9 national industrial expositions were held in major cities from Lisbon to St Petersburg. While both date and topic of London's Great Exhibition betray the influence of this trend, they also mark a significant transition. By devoting itself to the 'Works of Industry of All Nations' the Great Exhibition consciously repudiated narrow political ambitions and laid claim to an unprecedented universality. Henry Cole, in particular, was a strong advocate of internationalization. In keeping with his free trade principles, he insisted that the exhibition needed to "embrace foreign productions." This disavowal of an exclusive national purpose was to prove a decisive gesture, transmuting a large-scale industrial exhibition into a World Expo for the first time. It would remain essential to the definition of the event up to the present day.

When the Great Exhibition opened on May 1, 1851, Britain's global influence was approaching its zenith. In the following decades its economic lead would narrow, as the industrialization of continental Europe and the United States of America gathered steam, while the impending Indian Mutiny (of 1857) would unsettle its

position as a colonial superpower. At mid-century, however, its hegemony seemed assured, grounded in the world's most advanced industrial economy, scientific and technological leadership, uncontested maritime supremacy, and access to the vast markets of south and east Asia. The long peace following the defeat of Napoleon Bonaparte in Europe minimized military challenges, while the outbreak of the Taiping Rebellion (in January of the same year) severely disrupted China's stressed Qing government, facilitating the consolidation of Britain's commercial influence through the new Treaty Ports, pre-eminently Shanghai. If Britain was able to abjure crude nationalism at the 1851 exhibition, it was in no small part due to the fact that the world of the time was an exceptionally nurturing environment for British national interests. Yet cynicism makes for an untrustworthy judge when applied to the global status of the first Universal Exposition. Although it is comparatively easy for a hegemon to espouse universal or supra-national perspectives, cosmopolitanism nevertheless has a real life of its own, irreducible to surreptitious or discreditable motivations.

The guiding idea for the Great Exhibition was initially proposed at the highest level, by Queen Victoria's husband, Prince Albert. It was conceived as a universal event in the most ambitious sense of the term, not only global in scope, but also comprehensively representative of human inventiveness in every field of endeavor. The success of the event exceeded all expectations, attracting enormous international attention, and setting the Expo on course for its glorious international career. ✖





1851: The Great Exhibition

The Great Exhibition of the Works of Industry of all Nations was the world's first Universal Exposition. It was organized by the Royal Society for the Encouragement of Arts, Manufactures and Commerce, which served as a vehicle for the modernizing ambitions of Queen Victoria's husband, Prince Albert of Saxe-Coburg. Membership of the society included such prominent luminaries as Henry Cole (inventor of the first commercial Christmas card, and – less certainly – the first postage stamp), and George Wallis (artist, educationalist and curator).

The exhibition was held in a specially-designed glass and iron structure called the Crystal Palace, erected in London's Hyde Park, and lasted for five and a half months, from May 1 to October 15, 1851. It was attended by over six million people, equivalent to almost 30% of Britain's entire population at the time. Among the notable figures known to have attended the event were Charles Darwin, Charlotte Brontë, Lewis Carroll, and George Eliot. The French Royal Family traveled to see it, and Britain's own Royal Family visited three times.

An international invitation attracted 14,000 exhibitors from Britain, its dominions and the world beyond. Among the revolutionary mechanical contraptions on display at the event were a Jacquard loom, an envelope machine, a reaping machine from the United States, a forerunner of the fax machine (by Frederick Bakewell), an automatic vote tabulator (by William Chamberlin), and the Tempest Prognosticator (a leech-powered barometer). Signs of progress were clear everywhere, from new kitchen appliances and steel-making displays, to Alfred Charles Hobbs' improved locks, Mathew Brady's daguerreotypes, the first ever single-cast piano ironframe brought from Copenhagen, Denmark, by C.C. Hornung, and the precious metal handicrafts of Khudabadi Sindhi Swarankar from Sindh. The world's largest diamond, the Koh-i-noor, was on display, the world's first public conveniences (employing George Jennings' Water Closets) were introduced, and the America's Cup yachting race was intiated by a competition held in conjunction with the exhibition.

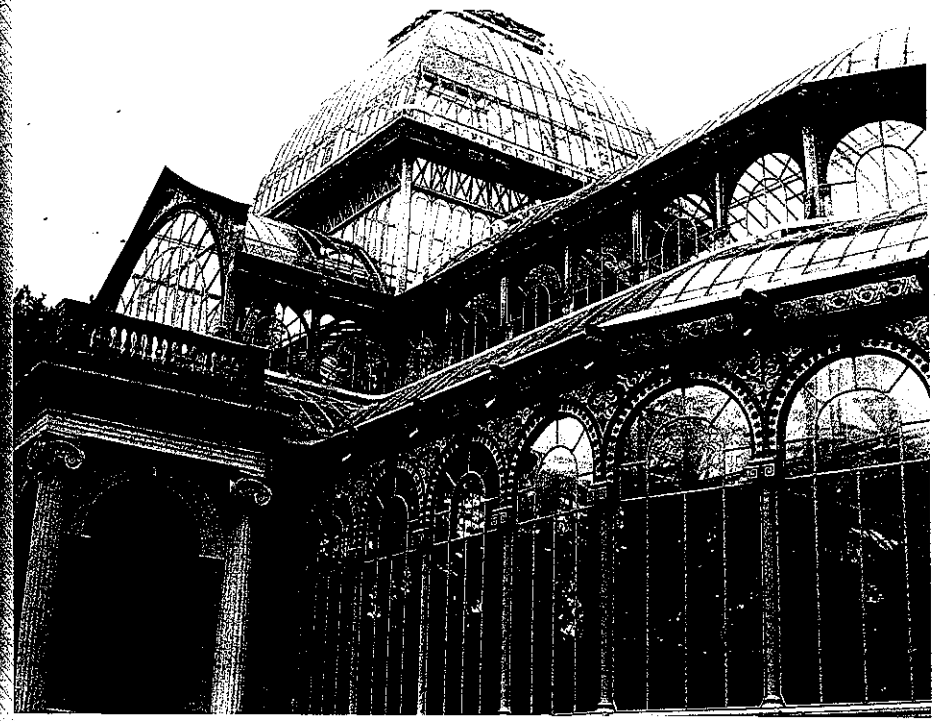
Ticket prices varied in a range from three guineas to one shilling, with three-quarters selling at the lowest price. Enormous crowds of visitors made the event into a huge economic success, generating a surplus of £186,000. For purposes of comparison, the total construction costs of the Crystal Palace amounted to just £150,000. The profits of the exhibition were directed to the establishment of cultural institutions in London, including the Victoria and Albert Museum, the Science Museum and the Natural History Museum, with enough remaining to fund an educational trust that has remained active to the present day.

The Crystal Palace

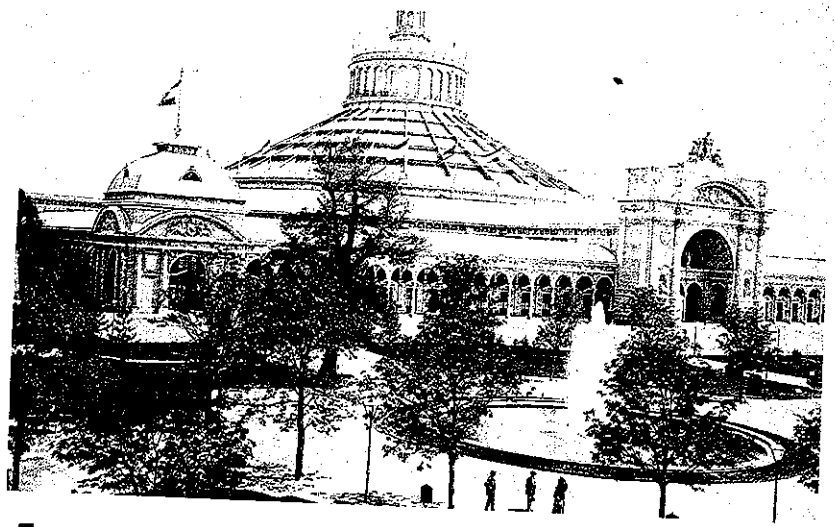
The alliance between architectural exhibitionism and the World Expo was sealed at the origin, in the shape of an immense cast-iron and glass structure that housed the 1851 Great Exhibition of the Works of Industry of all Nations, stretching the engineering capabilities of the mid-19th century to their limits. This Crystal Palace was erected in London's Hyde Park for the exhibition and later moved to suburban Sydenham (a pattern that would be copied by many other Expo landmarks in later years). It was eventually destroyed by fire, in 1936.

The Palace's creator was Joseph Paxton, formerly head gardener at the Chatsworth estate of the sixth Duke of Buckinghamshire. This background, which included experience in greenhouse construction, landscaping, and dynamic water features, provided inspiration for the design which Paxton completed in just 10 days, assisted by structural engineer Charles Fox. Paxton was later knighted for this work. The design was realized by Sir William Cubitt, overseen by a committee that involved Victorian engineering star Isambard Kingdom Brunel, over a period of less than nine months.

The originality and scale of the Crystal Palace created an overwhelming sensation. With a length of 563 meters, width of 138 meters, and height of over 124 meters, the building was large enough for fully-grown elm trees to line its main interior axis, among 90,000 square meters of exhibition space. The huge transparent structure, with its 84,000 square meters of glass, was designed to melt harmoniously into a magnificent park dominated by fountains. The tallest among the 12,000 jets spurted to a height of 76 meters, with over 500,000 liters of water cycling through the system. The Crystal Palace also offered the world's first public conveniences, which – according to scrupulous official records – were visited by precisely 827,280 relief-seekers (for a one-penny fee).

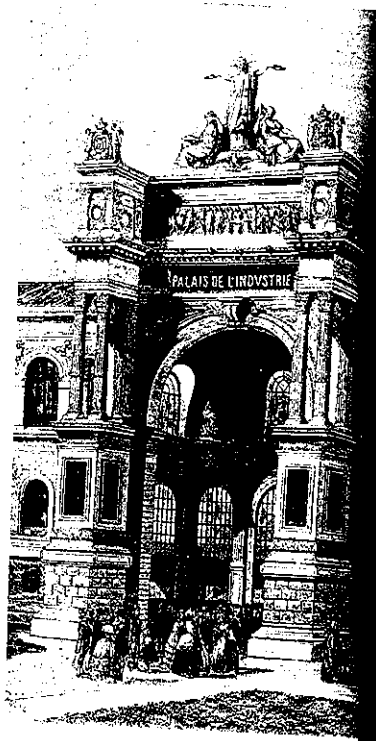


A Tale of **Two Cities**



Anglo-French competition carried the World Expo through a period of consolidation and incremental expansion, during which it alternated between Paris (1855 and 1867) and London (1862). While this prolonged tale of two cities clearly reflected the self-regard of both countries and their reigning monarchies, that of Queen Victoria in Britain and Emperor Napoleon III in France, by tacitly presenting their peaceful national rivalry as the two-chambered heart of the mid-19th century world order, it also served to establish the World Exposition as an enduring institution with a demonstrated transnational identity, establishing both a rough regularity in time and a principle of itinerancy in space, along with historically-grounded expectations of continual expansion and progress.

Just as the Great Exhibition had built on the experience of French industrial exhibitions, so the Exposition Universelle of 1855 took the 1851 event as its model. The institutionalization of the World Expo thus conformed to a semi-formal learning process. The significance of this was hugely deepened by the fact that the Anglo-French rivalry propelling the evolution of the Expo had, into the second decade of the 19th century, provided the basic motor of global conflict (culminating in the 'world wars' of 1754-63 and

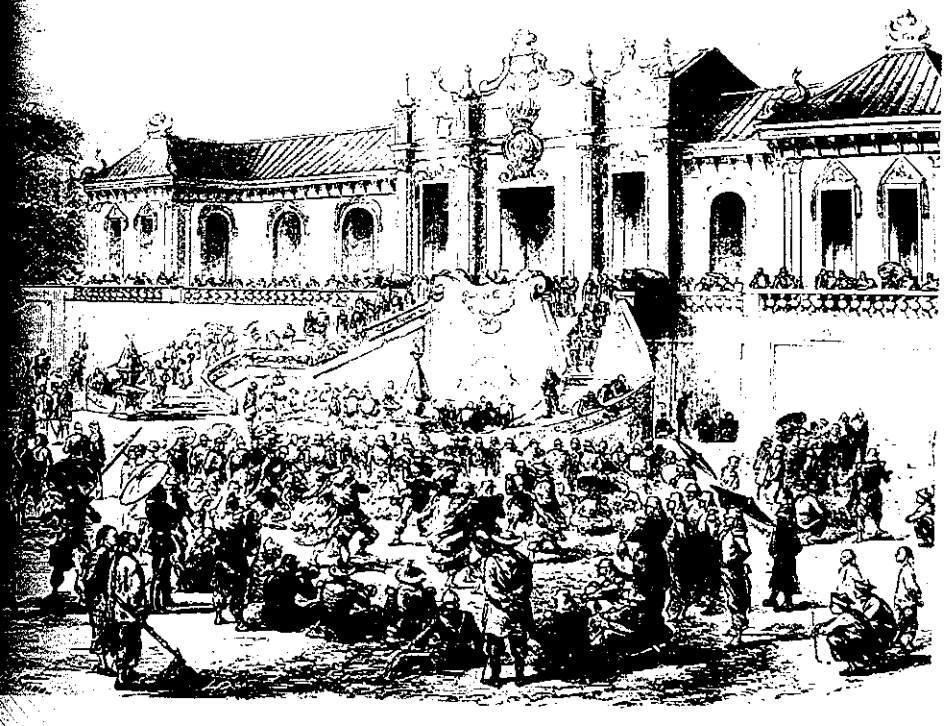


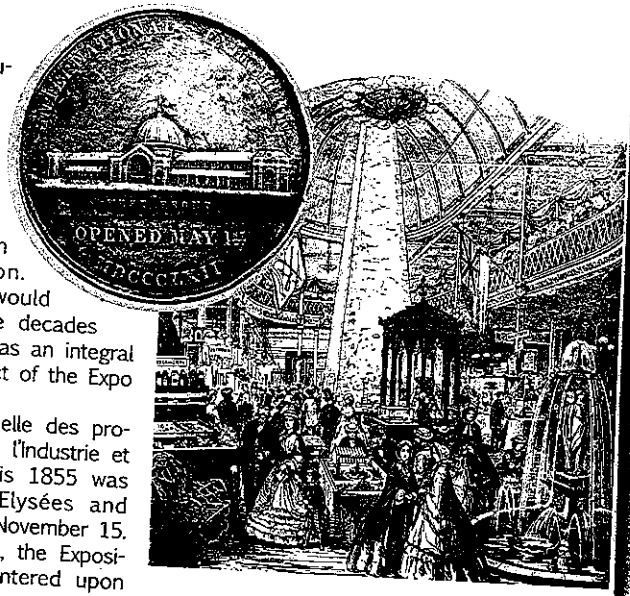
I wish you could have witnessed the 1st May 1851, the greatest day in our history, and the most beautiful and imposing and touching spectacle ever seen, and the triumph of my beloved Albert. Truly it was astonishing, a fairy scene ... It was the happiest, proudest day in my life, and I can think of nothing else.

– Queen Victoria

Yesterday I went for the second time to the Crystal Palace. We remained in it about three hours, and I must say I was more struck with it on this occasion than at my first visit. It is a wonderful place – vast, strange, new and impossible to describe. Its grandeur does not consist in one thing, but in the unique assemblage of all things. Whatever human industry has created you find there, from the great compartments filled with railway engines and boilers, with mill machinery in full work, with splendid carriages of all kinds, with harness of every description, to the glass-covered and velvet-spread stands loaded with the most gorgeous work of the goldsmith and silversmith, and the carefully guarded caskets full of real diamonds and pearls worth hundreds of thousands of pounds. It may be called a bazaar or a fair, but it is such a bazaar or fair as Eastern genii might have created. It seems as if only magic could have gathered this mass of wealth from all the ends of the earth – as if none but supernatural hands could have arranged it this, with such a blaze and contrast of colours and marvellous power of effect. The multitude filling the great aisles seems ruled and subdued by some invisible influence. Amongst the thirty thousand souls that peopled it the day I was there not one loud noise was to be heard, not one irregular movement seen; the living tide rolls on quietly, with a deep hum like the sea heard from the distance.

– Charlotte Bronte





1803-15). It was natural, therefore, for the rise of the Expo to be associated with the vision of a new template for international relations, substituting industrial competition for armed contention. Although this vision would be sorely tested in the decades ahead, it would persist as an integral and indispensable aspect of the Expo ideal.

The Exposition Universelle des produits de l'Agriculture, de l'Industrie et des Beaux-Arts de Paris 1855 was held on the Champs-Elysées and lasted from May 15 to November 15. Like the Great Exhibition, the Exposition Universelle was centered upon a single building of monumental proportions, in this case the Palais d'Industrie, designed by architect Jean-Marie Viel and structural engineer Alexandre Barrault. Viel and Barrault combined innovative iron-frame techniques with massive load-bearing masonry (of one-meter thickness) to construct a 260 meter by 105 meter exhibition hall, with a central display space more than twice as expansive as that provided by the Crystal Palace. Visitors were greeted at the entrance of the Palais de l'Industrie by Élias Robert's monumental sculpture of France Crowning Art and Industry. The stolid grandeur of the Palais d'Industrie was widely criticized (Octave Mirbeau famously compared it to "an ox trampling through [the] rose garden" of the Champs-Elysées), but despite its structural inelegance, ponderous gothic aesthetics and poor ventilation, it survived on the spot until 1897, when it was demolished to make room for an improved Expo venue.

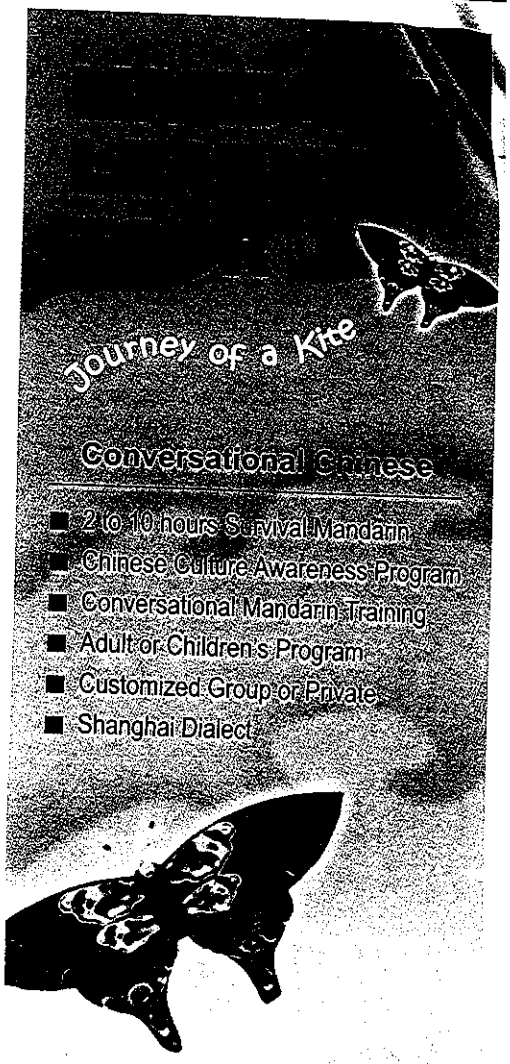
Attendance figures for the 1855 Exposition Universelle fell short of those for the Great Exhibition, expenses substantially exceeded revenues, and conservative critics decried the event for its embrace of crass populist materialism. It was nevertheless a remarkable success when judged in terms of Expo history, French modernization, and the political agenda of Emperor Napoleon III. By demonstrating that the achievement of the Great Exhibition was replicable, it simultaneously fortified the position of the Expo as a perpetual institution and of France as a peacefully industrializing power.

Queen Victoria and her family visited the Exposition, where they were graciously hosted by the Emperor and warmly greeted by the French people. This visit was a diplomatic turning point of genuine importance. The first by a reigning British monarch since 1431, it contributed substantially to Anglo-French reconciliation and a restoration of French pride angled towards international cooperation and industrial prosperity.

The 1855 Expo was also a personal triumph for Emperor Napoleon III and a vindication of his eclectic politics, which mixed autocratic and democratic elements, Anglophilia and romantic nationalism, ultratraditionalism and radical progressivism. By emulating the Great Exhibition while contesting its uniqueness, he made the Exposition Universelle into a creative paradox, reaching out to the English-speaking world in a gesture of rivalrous amity that transformed hostility into productive competition. Although the new Anglo-French relationship was cemented by military alliance in the Crimean War (beginning in October of the same year), its enduring tone, typified by a prickly but robust spirit of practical collaboration, owes much to the cultural foundations laid down at the 1855 Exposition. Quite deliberately, the Emperor referred to the Palais de l'Industrie as the 'Temple of Peace.'

The domestic implications were no less profound. The Emperor personally involved himself in the planning of the event, which he used as a vehicle to promote democratic consumerism, with exhibits selected to foreground items of everyday use and 'bargain goods' (bon marché), complete with price tags (an innovation). Ticket prices were adjusted downwards to attract a mass audience. At the same time, the fine arts were given unprecedented prominence. Hector Fuel's Palais des Beaux Arts, situated on the Avenue Montaigne, was filled with the greatest works of contemporary French painting, staging the competition between Jean-Auguste-Dominique Ingres' neoclassicism and Eugène Delacroix's romanticism, while the music of Hector Berlioz filled the Palais de l'Industrie. As France adapted itself to the commercial and technological agenda of the Expo, the Expo underwent a reciprocal modification that stretched its universality, spanning the products of industrial civilization from the most humble item of ordinary use to the highest pitch of artistic excellence.

The International, or Great London Exposition of 1862, was the last British Expo of the 19th century. It took place from May 1 to November 1, on a nine-hectare site adjoining the Royal Horticultural Society gardens in South Kensington, where London's Natural History Museum and Science Museum



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stand today. The audience was comparable in size to that of the Great Exhibition, and the event made a (very marginal) profit.

The exhibition hall was designed by Captain Francis Fowke, included a 351-meter frontal facade, two domes rising to 79 meters (the largest in the world), and a 26-meter-wide central nave with a height of 35-meters. Two large wings housed agricultural and industrial machinery. Despite its monumental proportions, the building was not well received and made no lasting contribution to the city's architectural heritage (The Art Journal dismissed it as "a wretched shed").

Over 28,000 exhibitors from 36 countries were represented at the event, whose most noteworthy attractions included components from Charles Babbage's mechanical computer, the Analytical Engine, state-of-the-art textile and steam propulsion machinery, and displays dedicated to advanced production processes such as rubber (from caoutchouc) and Bessemer steel manufacture. The trend towards democratic consumerism was reinforced by the lavish attention paid to household items, furnishings and decorations, with the arts and crafts movement work of William Morris receiving special commendation.

As Britain was abdicating itself from the Expo hosting circuit, French commitment to the fair rose to new heights. The second of five 19th century Paris-based International Exhibitions was held in 1867, on a 69-hectare site that included the Champ de Mars and the island of Billancourt. The main building was an oval-shaped structure, 490-meters by 380-meters in size, whose elaborate design consisted of concentric rings centered upon a central palace. Scores of smaller structures (nearly 100 in total) surrounded the main building, with dedicated pavilions built by guest nations making an appearance for the first time.

The 1867 Expo set new records in many respects, not least in its attendance figures, which comfortably exceeded nine million. It also introduced a number of important innovations, especially in its organization, which manifested a highly-rationalistic and perhaps distinctively Cartesian spirit. The displays of over 50,000 exhibitors were distributed according to a coordinated grid pattern that arranged them by geographical region and by type, bringing an unprecedented level of order to the show. ✖

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The Anglo-French Inheritance

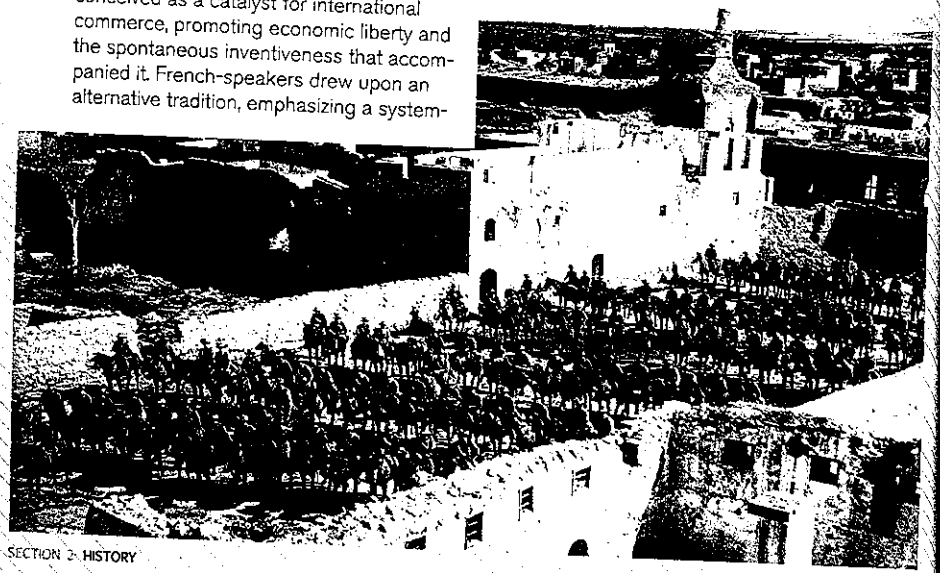
By the middle years of the 19th century, the militarized Anglo-French animosity that had structured the emerging world order for over a century was fading into historical memory, and the earliest World Expos contributed significantly to the process of reconciliation. These first world fairs told a true tale of two cities, as they alternated between London (1851, 1862) and Paris (1855, 1867), binding former antagonists into competitive partners through royal visits, commercial exchanges, and reciprocal promotions.

Yet the Anglo-French rivalry had never been confined to raw military confrontation. Each was a representative, however imperfect, of distinct social models with universal claims and application to such questions as the origin of legal rights and political legitimacy, the role of the state, and the keys to prosperity. For over a century the contrast between these different visions would play out on the Expo stage, as they evolved and adapted to an increasingly interconnected world, counterposing Anglophone globalization to Francophone globalism.

For the English-speaking world, with its traditions of common law, empiricism, individualism, incremental change, limited government and free trade, the Expo was conceived as a catalyst for international commerce, promoting economic liberty and the spontaneous inventiveness that accompanied it. French-speakers drew upon an alternative tradition, emphasizing a systematically formalized legal code, the sovereignty of reason, social solidarity, revolution, government activism and mercantilism. From this perspective, the Expo was above all an international institution, to be understood as an example of political cooperation and collaborative problem-solving, with national governments and intergovernmental organizations as principal actors. France was the first world power to seek international governance of the Expo, and the resulting body, the Bureau of International Exhibitions (BIE), has been headquartered in Paris ever since (see p.23).

The Anglo-French double helix has shaped the Expo to the present day, intertwining a French passion for institution-building with the Anglophone techno-economic prowess of the American Century. This rivalry was also the Expo's first, and enduring, test of cultural and political pluralism, upon whose foundations a far broader intercultural variety has since been built.

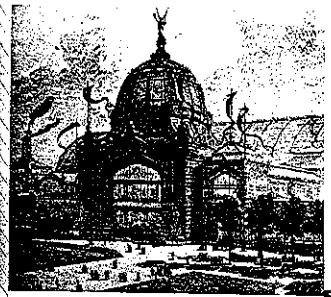
The final challenging page in this test was turned at the 1967 Montreal World Expo, where French President Charles De Gaulle seemed to call (not entirely diplomatically) for a free Quebec. The episode passed without serious disruption, and the Expo sailed on into ever widening horizons.



1889: Exposition Universelle

France's fourth Universal Exposition, held in Paris from May 6 to October 31, 1889, was immortalized by the soaring iron structure that served as its entrance arch: the Eiffel Tower. The Expo site covered 96 hectares beside the Seine, including the Champ de Mars, the Trocadéro, the quai d'Orsay, and the Invalides esplanade. A three-kilometer railway that was specially constructed to transport visitors around the site had conveyed more than 6.3 million passengers by the Expo closing date.

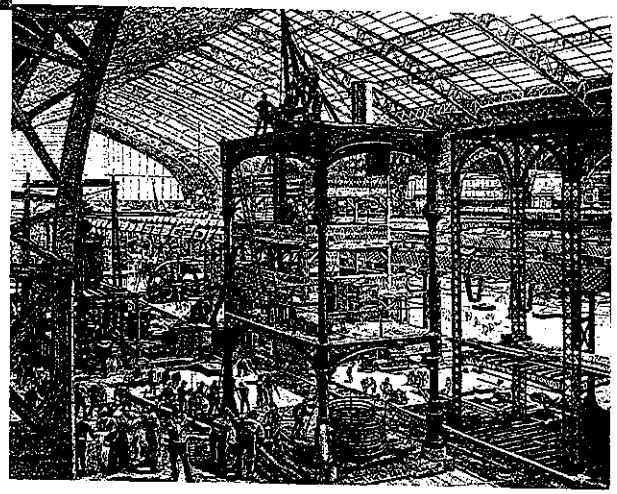
Like the Philadelphia Expo of 1876, the Exposition Universelle de 1889 was a centennial celebration, marking the 100th anniversary of the storming of the Bastille and the beginning of the French Revolution. A replica of the Bastille and its environs was built for the occasion. Whilst domestically popular, this revolutionary theme was regarded unfavorably by the other European powers whose official representation at the event was reduced accordingly.



International exhibitors were undeterred, however (over 27,000 participated, alongside 34,000 domestic exhibitors), and visitors flocked to the Expo in record-breaking multitudes, with over 32 million attending.

In addition to Gustave Eiffel's tower, over eighty exhibition buildings were erected on the Champ de Mars. Most notable was Ferdinand Dutert's Galerie des Machines, which employed a system of hinged iron arches to span a vast mechanical display space (111-by- 443 meters in area) – the world's longest at the time. The realization of Dutert's vision fell to Victor Contamin, in an example of the architect-plus-engineer teamwork regularly demanded by challenging Expo structures.

Among the features of the 1889 exposition that received special mention from contemporaries were its lavish Colonial Exhibition (where Claude Debussy was first exposed to Javanese gamelan music); the rise of South America among exhibitors; the 'Great Model of the Earth' created by Theodore Villard and Charles Cotard; the exotic building designed by Paris architect Pierre-Henri Picq in Byzantine-Egyptian-Romanesque style that survives today as the Schoelcher Library (on a new site); and the 'Wild West Show' brought by William Cody (Buffalo Bill), starring American sharpshooter Annie Oakley. Remarkable mostly in retrospect is the list of famous visitors, dominated by the painters Vincent van Gogh, Paul Gauguin, Edvard Munch and James McNeill Whistler, but also including the novelist Henry James and electrical revolutionary Thomas Edison (whose reputation at the time was already considerable).



Widening **Ripples**

The internationalization of the World Exposition passed a new threshold in 1873, as this exhibition was the first to break out of the prolonged alternation between London and Paris, as well as the first to be held in the German-speaking world. The Vienna Universal Expo (Weltausstellung 1873 Wien) was held in the capital of the Austro-Hungarian Habsburg Empire, in the Prater, a former hunting ground at the edge of the city, from May 1 to October 31. The Expo motto was Kultur und Erziehung ('Culture and Education').

The Vienna Expo drew more than 53,000 exhibitors (a new record) and seven million visitors (second only to the Expo of 1867). Its main display hall, Carl von Hasenauer's domed Rotunde, was acclaimed as an architectural and engineering masterpiece, and performances of works by Handel and Strauss confirmed the status of Vienna as the musical capital of the world. Guests included the Russian Tsar and Persian Shah, and the largest one-day crowd to date – 140,000 – were welcomed to the closing ceremony. Yet despite these attainments, the event was historically cursed. Within weeks of the opening, a national economic crisis buried it in gloom and made a mockery of its optimistic message. The dark mood was blackened further by an outbreak of cholera that decimated the organizers' expectations of visitor numbers (no less than 20 million had been anticipated) and plunged it into deep financial deficit.

The internationalization of the Expo took another major leap in 1876, when the Centennial International Exhibition, or International Exhibition of Arts, Manufactures and Products of the Soil and Mine, was held in Philadelphia, Pennsylvania, of the United States, where the Declaration of independence had been signed 100 years before. This was the first Universal Exposition to be held outside Europe, as well as the first to be held in any city other than a national capital. It occupied an 115-hectare site designed by Hermann J. Schwarzmann in Fairmount Park, beside Schuylkill River, and lasted from May 10 to November 10. Despite crushing summer heatwaves, roughly 10 million visitors attended the exhibition (a number equivalent to 20% of the total US population). The opening day crowd of over 186,000 set a new Expo record, which was shattered on Pennsylvania Day, September 28, when over a quarter of a million attended.

With five principal buildings, amongst around 200 in total, the 1876 Expo was far more architecturally decentralized than previous events. After a design competition failed to produce practical plans, reliable builders were commissioned to design and assemble rapidly erectable structures, with many using prefabricated parts. Architect Henry Pettit and engineer Joseph M. Wilson were responsible for the turreted Main Exhibition Building, the world's largest by area enclosed (at 8.7 hectares, including a 558-meter central avenue), as well as for the popular Machinery Hall, a 427-meter by 110-meter wooden-frame structure with 63-meter by 64-meter annex. The other major structure were James Windrim's (250-meter by 160-meter) barn-like Agricultural Hall, and two Schwarzmann buildings: the (117-meter by 59-meter) Moorish-style Horticultural Hall, and the beaux-arts Memorial Hall, which served as the exhibition's fine arts center. Twenty-six US states had buildings of their own, as did 11 guest nations. There was also a Women's Pavilion (an Expo first).

Melvil Dewey's new decimal classification system was used to catalog the contributions of 31,000 exhibitors, which included Alexander Graham Bell's telephone, a Remington Typographic Machine (typewriter), Heinz Ketchup, a Wallace-Farmer Electric Dynamo, the Waltham Watch Company's automatic screw-making machine, Hires Root Beer, Turkish marijuana, and a Kudzu eradicator. An enormous Corliss Steam Engine in the Main Building powered that building's other dynamic exhibits. Elsewhere on the site, 'Colonial Revival' reconstructions of pioneer domiciles celebrated the young country's homesteading traditions, and for 50 cents visitors could climb the Statue of Liberty's right arm and torch (to raise funds for the rest of the statue). ✖

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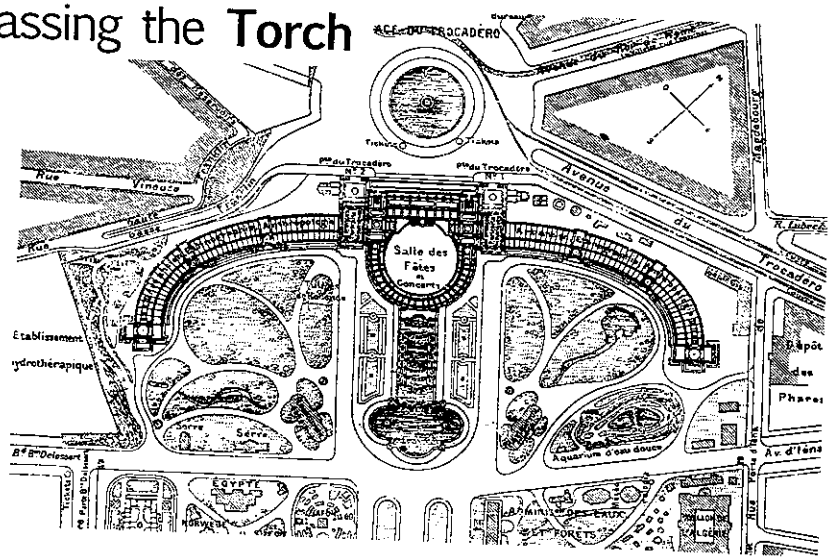
Passing the **Torch**



As the Statue of Liberty was completed in stages it contributed a new thread of consistency to the late 19th century World Expos. The histories of the statue and the fair are intricately interwoven, with pieces of the statue displayed at the expos of Philapelphia (1876) and Paris (1878). Maurice Koechlin was responsible for both the internal structure of the Statue of Liberty and – as Gustave Eiffel's chief engineer – for structural design of the most iconic expo monument of all time.

Sculpted by Frédéric Auguste Bartholdi, the monumental statue entitled Liberty Enlightening the World commemorated the American Declaration of Independence of July 14, 1776, symbolizing the friendship between France and America and the solidarity between two revolutionary republican regimes, grounded in universal ideologies based on the rights of man, and forged in the military cooperation that birthed the United States during its Revolutionary War. Less consciously, it also illuminated the emergence of a reconstructed world order, in which Anglo-French cultural rivalry would be elevated and metamophosed through repolarization of the leading Anglophone and Francophone powers (see p.88), one that would dominate the expos at the turn of the century even more consequentially than the zig-zag between London and Paris had dominated those in the early years of the event. Over a protracted series of events, France, as the self-elected representative of universalizing Europe-

The New Colossus

Not like the brazen giant of Greek fame,
With conquering limbs astride from land to land;
Here at our sea-washed, sunset gates shall stand
A mighty woman with a torch, whose flame
Is the imprisoned lightning, and her name
Mother of Exiles. From her beacon-hand
Glows world-wide welcome; her mild eyes command
The air-bridged harbor that twin cities frame.
"Keep, ancient lands, your storied pomp!" cries she
With silent lips. "Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore.
Send these, the homeless, tempest-tossed to me,
I lift my lamp beside the golden door!"

– Emma Lazarus

The Entanglement of Liberty

Liberty Enlightening the World, the centenary monument to the signing of the United States Declaration of Independence in 1776, stands on Liberty Island (originally Bedloe's Island) in New York Harbor, facing out across the Atlantic to welcome visitors, immigrants, and returnees from the Old World to the New. The 46-meter statue (standing atop a 47-meter pedestal and foundation) depicts a female figure modeled upon the Roman goddess Libertas. She is radiantly crowned, raises a torch in her right hand, and trampies upon broken chains. In her left arm she bears a tablet inscribed with the date JULY IV MDCCLXXVI (July 4, 1776). Emma Lazarus' sonnet The New Colossus is inscribed upon a bronze plaque, in the statue's interior.

Better known as the Statue of Liberty, this modern colossus was a gift to the United States from the people of France, commemorating the friendship between the two countries forged during the American Revolution. It was finally dedicated on October 28, 1886, after a decade of delay, and of deep entanglement with the history of the World Expo.

Liberty's sculptor, Frédéric Auguste Bartholdi, turned to the expertise of Gustave Eiffel's chief engineer Maurice Koechlin for the copper-sheathed statue's metallic skeleton. Construction of the pedestal was an American undertaking, overseen by Richard Morris Hunt.

Although completion of the statue had been intended for July 4, 1876, by the time the Centennial Exposition in Philadelphia opened, only the torch-bearing right arm had been finished. This part of the statue was a major attraction at the Expo. Visitors were charged 50 cents to climb it, and the money raised was directed to funding the pedestal. After the fair, the arm was relocated to Madison Square in New York City, to await the remainder of the statue. By the opening of the 1878 Paris Exposition opened, the head had been completed, and it too became a prominent Expo exhibit, displayed in the garden of the Trocadéro Palace (other pieces were also on show elsewhere at the Expo site, on the Champs de Mars). It was not until June 17, 1885, that the entire statue was assembled in the United States.

Like the Expo, the Statue of Liberty played a pioneering role in the history of electrification. From 1886 to 1902 it functioned as a lighthouse, the first in the United States to employ electricity, supplied by a generator on the island.

Since 1972, the American Museum of Immigration has been housed beside the pedestal, and in 1984 the statue was added to the list of World Heritage Sites.

1893: The World's Columbian Exposition

The Universal Expo of 1893, named the World's Columbian Exposition to mark the 400th anniversary of Christopher Columbus' arrival in the Americas, was held in Jackson Park, Chicago, from May 1 to October 30. Set in the industrial heartland of the United States, on the shore of Lake Michigan, it clearly heralded the arrival the American era (which the Philadephia Expo of 1876 had only tentatively anticipated). By wresting the event from the genteel cities of the country's east coast to a metropolis best known for its industrial churn, clattering railyards and slaughterhouses, the Chicago Expo introduced the world to a new America and a new, unchained industrial order, characterized by rough-edged development on a heroic scale, smelling of blood and axle grease.

Working under Expo Director Charles H. Wacker, the principal expo designers, Daniel Burnham (architectural supervisor) and Frederick Law Olmsted (site layout), envisaged the Expo as an opportunity to rebuild Chicago's image in more diginified terms, drawing upon classical European models of gracious splendor. Their Court of Honor or 'White City' was set in a 240-hectare landscaped site, among canals and lagoons, encompassing nearly 200 buildings. A consistent aura of dreamlike, cultivated elagance was to be communicated through uniform white coloration and mandatory Beaux-Arts styling, but the White City's neoclassical aesthetics were supported by thoroughly modern construction techniques, employing prefabrication, metal frames, and faux-marble staff facades. Among the major structures conforming to the fair's Beaux-Arts guidelines were Richard Morris Hunt's Administration Building, Charles McKim's Agricultural Building, Henry Van Brunt and Frank Maynard Howe's Electricity Building, Robert Swain Peabody's Machinery Building, George B. Post's Manufactures and Liberal Arts Building, Solon Spencer Beman's Mines and Mining Building, and Sophia Hayden's Women's Building.

Burnham's rejection of the highrise-oriented Chicago School (or 'commercial style') architects has been criticized as a setback for the urban design trends that genuinely represented the dawning American Age. Louis Sullivan, whose Transportation Building broke with the approved style by incorporating defiant modern features, thought the White City had retarded American architecture by forty years. The neoclassical vision of the 1893 fair made it a highwater mark for the Beaux-Arts style in America, establishing it securely in the public imagination (if not in enduring edifices). Alongside the flux, filth and fury of the New World's economic engine-room was erected a mirage of timeless republican virtue and imperturbable authority, a Platonic idea of American power translated into eternity.

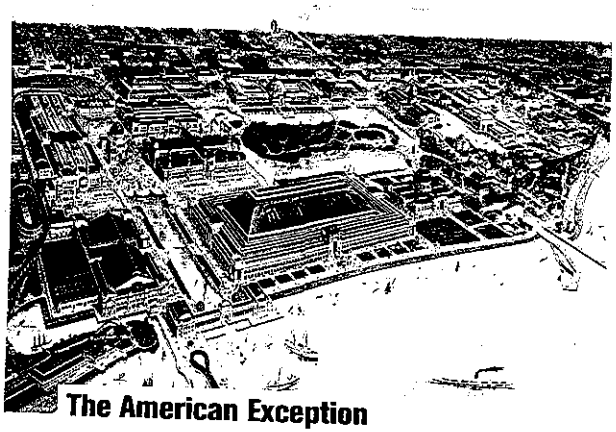
The 1893 fair overspilled Burnham's theme park heaven, however, onto the 1.5-kilometer strip of the Midway Plaisance, where the White City's infernal twin ran riot. The central attraction of Sol Bloom's expo carnival – the world's first amusement park – was the giant (80-meter) wheel invented by George Ferris, intended as an appropriately monumental response to Paris' Eiffel Tower. With 36 cars, each carrying 60 people, the Ferris Wheel offered dining, onboard music and panoramic views of the site to 1,600,000 visitors over the course of the expostion. The Ferris Wheel was so successful that it was erected again for the World's Fair at St. Louis in 1904, but it was only one attraction among hundreds on the Midway strip, which included a circus, an ice-skating rink, camel rides, animal-tamers, the first commercial movie theater (Eadweard Muybridge's 'Zoopraxographical Hall') and a multitude of ethnographically-themed shows, from fake Alpine and South Sea villages to a Turkish bazaar and pseudo-Egyptian belly-dance performances at the 'Street in Cairo,' as well as numberless restaurants and bars to refresh the dizzy throng. Adding significantly to the excitment was 'Buffalo Bill' Cody's by now internationally renowned Wild West show, which had been inexplicably excluded from the exposition, but participated nonetheless, in an unofficial arena adjoining the Midway Plaisance.

Almost 26 million people (equivalent to about half the US population) attended the exposition during its six-month run. On October 9, 1893, the day designated as Chicago Day, the fair set a record for outdoor event attendance, drawing 716,881 persons to the fair. Forty-six nations participated (including Haiti, which selected Frederick Douglass as its delegate).

Among the 72,000 tons of exhibition material, divided among 250,000 displays, were a John Bull locomotive (a 62-year-old vintage machine), milk sterilization machines, and a replica Viking ship (brought by Norway). Food products were especially prominent. The fair introduced the hamburger to the United States, among a a range of novel food items that included Aunt Jemima pancake mix, Cracker Jack, Cream of Wheat, Juicy Fruit gum, Quaker Oats, and Shredded Wheat. The most historically significant exhibition content, however, was the electrical technology displayed in its own dedicated hall (see p.98).

Important presentations and events included the 1893 Parliament of the World's Religions (held from September 11-27), a reading by feminist author Kate McPhelim Cleary (her poem 'Nebraska', on that state's special day), a Congress of Mathematicians, a performance of Scott Joplin's Chicago ragtime, the first Indonesian music performance in the US, and an influential lecture by Frederick Jackson Turner, introducing his Frontier thesis (see pp.96-7).

The fair ended on a calamitous note, with the assassination of Chicago's popular mayor Carter Harrison, Sr., just two days before the fair's scheduled closing ceremonies. A public memorial service replaced the planned celebration, but nothing could detract from the historical significance of the event that had just passed.



The American Exception

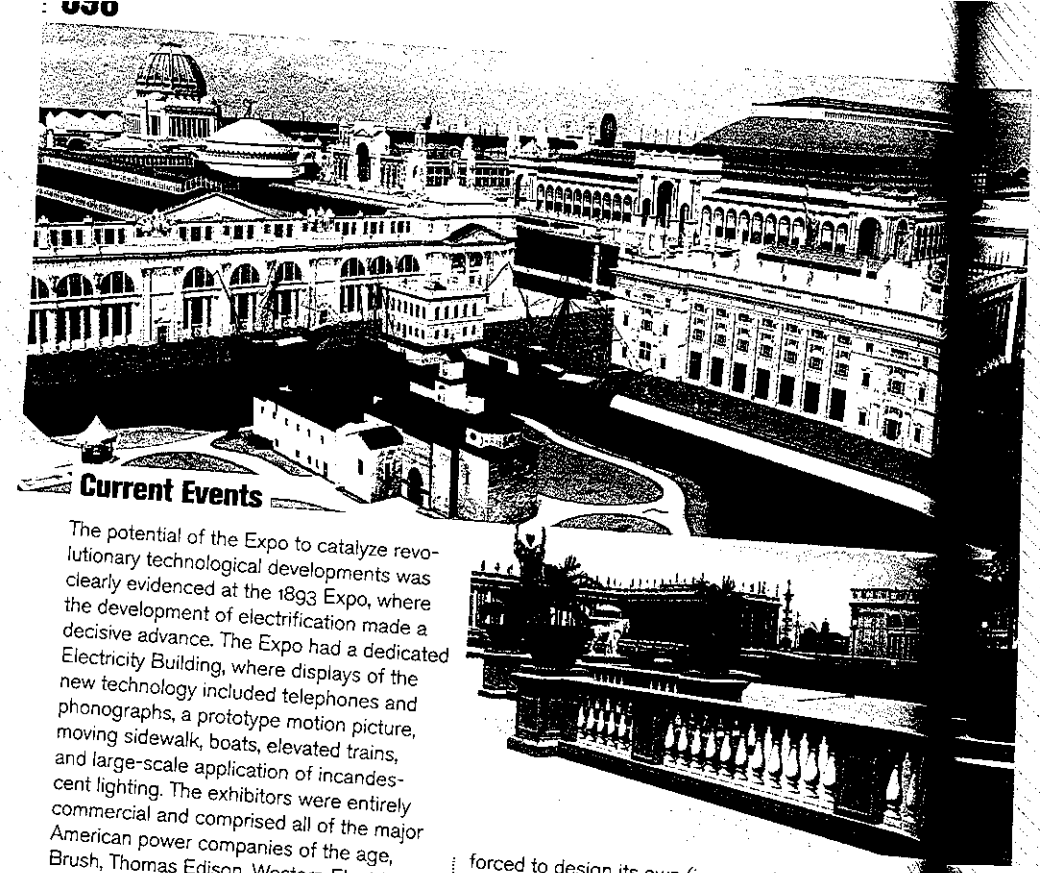
The World's Columbian Exposition, held in Chicago in 1893, is widely regarded as a symbolic threshold in international affairs, corresponding to the recognition of the United States as an emergent power of titanic potential and the first glimmerings of the coming American Century. Whilst the Expo was in process, historian Frederick Jackson Turner delivered a paper entitled 'The Significance of the Frontier in American History' to the American Historical Association, arguing that: "The peculiarity of American institutions is the fact that they have been compelled to adapt themselves to the changes of an expanding people – to the changes involved in crossing a continent, in winning a wilderness, and in developing at each area of this progress out of the primitive economic and political conditions of the frontier into the complexity of city life."

Turner's thesis, later expanded in an essay collection with the same title, was the first articulation of American Exceptionalism, forged in the fierce freedom of the frontier, where a primitive struggle for existence was constantly recycled and social development recommenced from near-zero. This was an idea that would inspire or antagonize millions in the years to follow, by giving expression to a 'special providence' that exempted America from the norms, conventions and expectations binding other peoples. An unshackled giant on the horizon of history seemed to be shredding every traditional or institutional constraint.

Although the World Expo provided an early stage for this new historical apparition, as the event became formally institutionalized (under French coaxing) it quickly came into conflict with the impulse of American Exceptionalism towards unfettered agency. The greatest American World Fair of the 20th century, held in New York 1939-40, lost official sanction after violating BIE rules governing event duration (by running for two successive years). New York's subsequent World Fair, held in 1964, was also staged beyond BIE auspices. In fact only three of the post-WWII US Expos have been sanctioned by the BIE: the Century 21 Exposition (Expo 1962, Seattle); HemisFair '68 (Expo 1968, San Antonio); and the 1982 World's Fair, held in Knoxville, Tennessee.

Relations between the USA and the Expo deteriorated further with the exit of the country from the BIE in June 2001, after funding was halted by the US Congress. Since the 2001 congressional ruling, US Expo participation must be covered by private sponsors. In addition, US representation must be endorsed by Congress, which does not occur automatically.

US participation at World Expo 2010 was beset by organizational and funding problems that were only fully resolved in late 2009, after serious doubts has arisen as to the likelihood of US representation. Eventually, a realistic appraisal of the 2010 Expo's historical, commercial and diplomatic importance prevailed, and high-level intervention by US Government officials, including Secretary of State Hillary Clinton, secured the country's participation. Given the reliable popularity of the USA at Expo, the country's supporters will no doubt be hoping that recent trends can be reversed, and that traditions of American Exceptionalism – first delivered at the Expo of 1893 – do not entirely doom the US relationship with the event.



Current Events

The potential of the Expo to catalyze revolutionary technological developments was clearly evidenced at the 1893 Expo, where the development of electrification made a decisive advance. The Expo had a dedicated Electricity Building, where displays of the new technology included telephones and phonographs, a prototype motion picture, moving sidewalk, boats, elevated trains, and large-scale application of incandescent lighting. The exhibitors were entirely commercial and comprised all of the major American power companies of the age, Brush, Thomas Edison, Western Electric, and Westinghouse. From overseas, Ottomar Anschütz brought his Electrotachyscope, which projected moving images using a Geissler Tube. According to the Expo's Artistic Guide: "It is the intention of the management to make the World's Fair site and the buildings one grand exemplification of the progress that has been made in electricity."

The most radical contribution, however, concerned the operation of the site itself. During preparations for the Expo, an epic contest took place between emerging electric titans, the General Electric Company (representing the direct current approach of Thomas Edison) and Westinghouse (promoting Nikola Tesla's alternating current system), over the contract to power the event. When Westinghouse won the bid, the progress of alternating current became unstoppable, although the company was forced to design its own (improved) lightbulb, after Edison prevented the use of his patented bulbs in retaliation for the defeat.

Tesla's high-voltage genius was on full display at the Expo, through exhibitions of phosphoresent and neon lighting, as well as Westinghouse polyphase systems. These electrical wonders included a switchboard, electrical generating and transmission equipment (polyphase generators, step-up transformers, transmission line, step-down transformers), induction and synchronous motors, and rotary direct current converters, along with meters and other apparatus.

Visitors to the 1893 fair were exposed to a technology that seemed to have directly crossed from the fantastic realms of science fiction into mundane social application. By stepping into the future, they accelerated its arrival, partaking in a self-fulfilling prophecy that is the Expo's true specialty. A brighter tomorrow beckoned, irresistibly.

The Plaisance was a medley, a Vanity Fair; it was an 'Ethnology Exhibit', according to the catalog, run riot; it was geography's nightmare; but over and above everything else one found it a playground, a frolic of nationalities, an enormous whirligig of pleasure. ... For the street was a cauldron into which a giant hand had tossed ingredients of every conceivable kind, sprinkling it all with 'the salt of the earth' and a lot of peppery savages. And so it was a bubbling, seething, foaming mass, stirring around faster and faster, boiling, spilling over, sizzling on, ever noisier, swifter, hotter, until it exploded on the last night with a terrible bang of steam and floated away as a vapor that we try in vain to seize. You recall only a confused mass of sensations; a passage of amusing and interesting events swifter than you could grasp; a series of scenes that made you laugh because of the comical hopelessness of the effort to comprehend them; a confusion of noise – nay, of hubbub and roar – and a kaleidoscope of color and motion ...

– Charles Mulford Robinson (1897)

For outsiders, it was the sheer size of the exposition that made it seem such an impossible challenge. That the fair's grounds would be vast and its buildings colossal was something every Chicago resident took for granted; what mystified them was how anyone could expect to build the biggest thing ever constructed on American soil, far bigger than Roebling's Brooklyn Bridge, in so little time. Burnham knew, however, that the fair's size was just one element of the challenge. The gross features of the fair envisioned in the plan concealed a billion smaller obstacles that the public and most of the exposition's own directors had no idea existed. Burnham would have to build a railroad within the fairgrounds to transport steel, stone, and lumber to each construction site. He would have to manage the delivery of supplies, goods, mail, and all exhibit articles sent to the grounds by transcontinental shipping companies, foremost among them the Adams Express Company. He would need a police force and a fire department, a hospital and an ambulance service. And there would be horses, thousands of them – something would have to be done about the tons of manure generated each day.

– Erik Larson

They were bound this day for the city of Chicago, and the World's Columbian Exposition recently opened there. Since their order had come through, the "scuttlebutt" among the excited and curious crew had been of little besides the fabled "White City," its great Ferris wheel, alabaster temples of commerce and industry, sparkling lagoons, and the thousand more such wonders, of both a scientific and an artistic nature, which awaited them there.

Fairgoers would see the ship overhead and yet not see it, for at the Fair, where miracles were routinely expected, nothing this summer was too big, too fast, too fantastically rigged out to impress anybody for more than a minute and a half, before the next marvel appeared.

– Thomas Pynchon

It might have been assumed that the exhibition organizers, led by Daniel Burnham, would have looked to architects of the progressive Chicago School to design the buildings of the 1893 exposition, but the chosen style was Beaux-Arts. With its symbolic links to the democratic republicanism of classical antiquity, and an appearance that suggested power and permanence, it was viewed as the perfect style to represent the growing status and ambitions of the United States.

– Anna Jackson

an civilization, was passing the torch to the New World, with Universal Expositions as rites of passage.

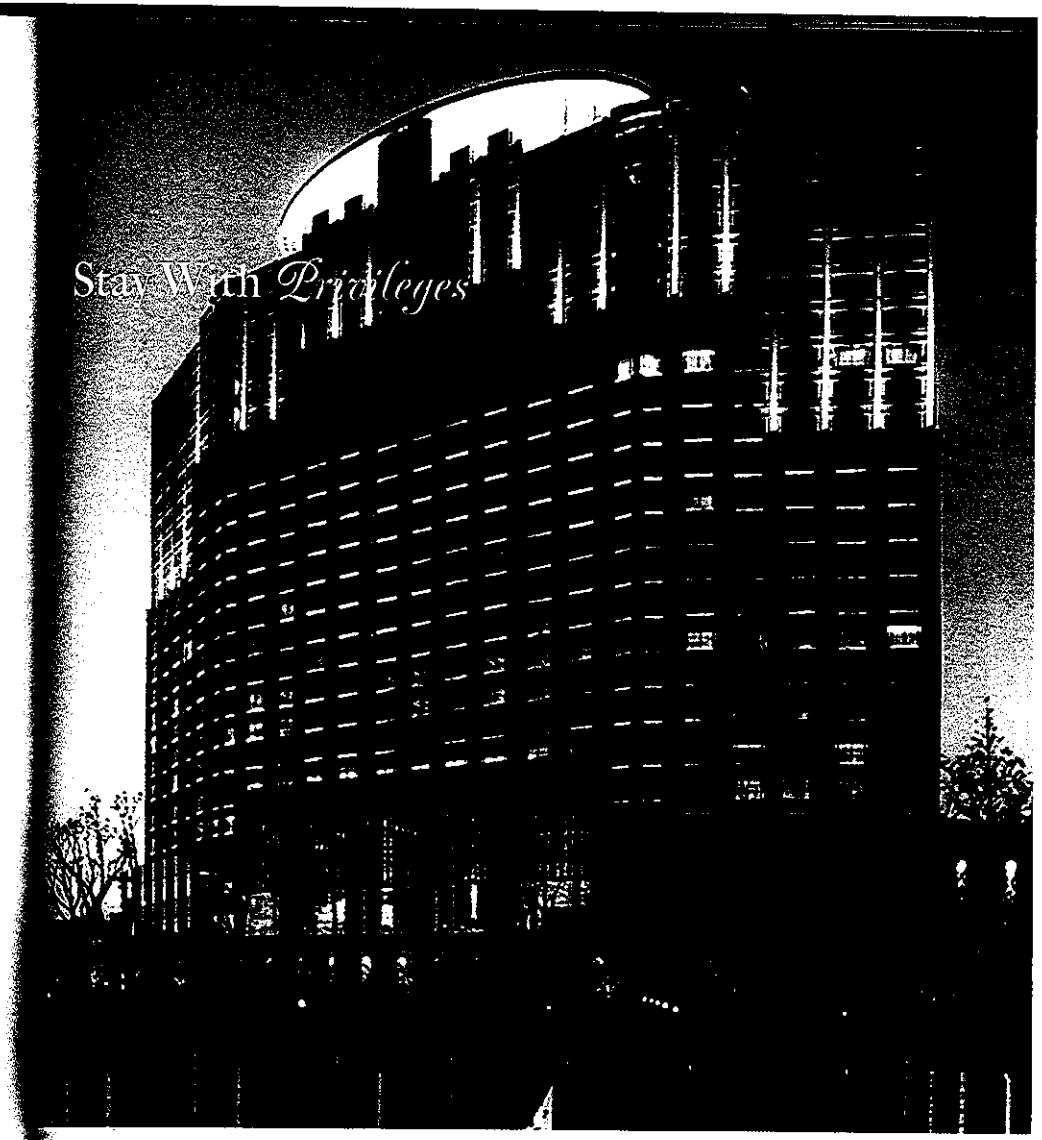
The Expo returned to Paris in 1878, and once again France demonstrated its singular genius for the event, raising both its scale and its seriousness to previously unimagined heights. France had been demoralized and disoriented by defeat in the 1870 Franco-Prussian War, followed by the turmoil of the Paris Commune, and the 1878 Exposition Universelle made a valuable contribution to the restoration of national confidence and purpose. It took place from May 1 to November 10 on a 27-hectare site centered upon the Champ de Mars, with a total of 16 million visitors attending. French exhibits occupied half the display area, with English-speaking countries accounting for roughly a third of the remaining space. Germany did not participate.

Alongside the very extensive (and by now traditional) displays dedicated to new machinery and fine arts, the 1878 Expo paid unprecedented attention different varieties of national architecture, including examples from Asia, Africa and the Americas. A special exhibition devoted to this topic lined the 730-meters of the Avenue des Nations. The architectural highlight of the fair was the Moorish-style Trocadéro Palace, besides which the completed head of the Statue of Liberty was shown. Technological advances in the fields of electric lighting, telephony and photography were represented, as was Félix du Temple's 1874 Monoplane. The new building material of staff (a mixture of jute fiber, plaster of Paris, and cement) was used extensively for the first time and proved ideal for the rapid an economical construction of impressive temporary structures. The Expo also provided a platform for substantial international agreements in such areas as intellectual property protection, mail delivery, and Braille.

A darker side of modernity was also evident at the 1878 Exposition Universelle. While commodities from the European colonies had been prominently exhibited at the Expo since 1851, the 1878 event marked a shift towards imperial folk anthropology and racial exoticism, with the introduction of a 'negro village' (inhabited by 400 'natives'). The exhibit tilted the celebration of industrial civilization into complacent supremacism by implicitly counterposing the cultural inertia of 'primitive' colonized peoples to the dynamic historicality of modernizing – and vigorously colonizing – societies. This pseudo-scientific human zoo was a very popular (and influential) attraction, repeated quite exactly at the Expo of 1889 and echoed by similar 'villages' at expositions on both sides of the Atlantic. Critics of later decades, less enamoured of European technical and economic prowess and its long, globalizing surge, would come to find deep symbolic meaning in the exhibit, as an attestation to the limits, stresses and fractures of the 19th century international order and the ugly faultlines that distorted its cosmopolitanism.

In the final decade of the century the prestige and grandeur of the World Expo rose to a zenith that was not to be exceeded during the remainder of the millennium. Three of the most magnificent World Expos in history took place in the shadow of the event's greatest monument – quite literally in two cases, symbolically in the other. Built for the Paris World Expo of 1889 (see p.89), the Eiffel Tower was a triumph of engineering and modernist industrial design that serves as an immortal icon of the event (see p.102). It remained the tallest artificial structure in the world until the completion of New York's Chrysler Building in 1930,

In 1893, the epochal World Expo of 1893 was held in Chicago (see pp.94-5), veneering white stucco classicism over the new engine room of the world economy, and announcing a tectonic shift in the order of the world. The long shadow of the Eiffel Tower would stretch even here, inspiring the metallic giganticism of George



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The Eiffel Tower

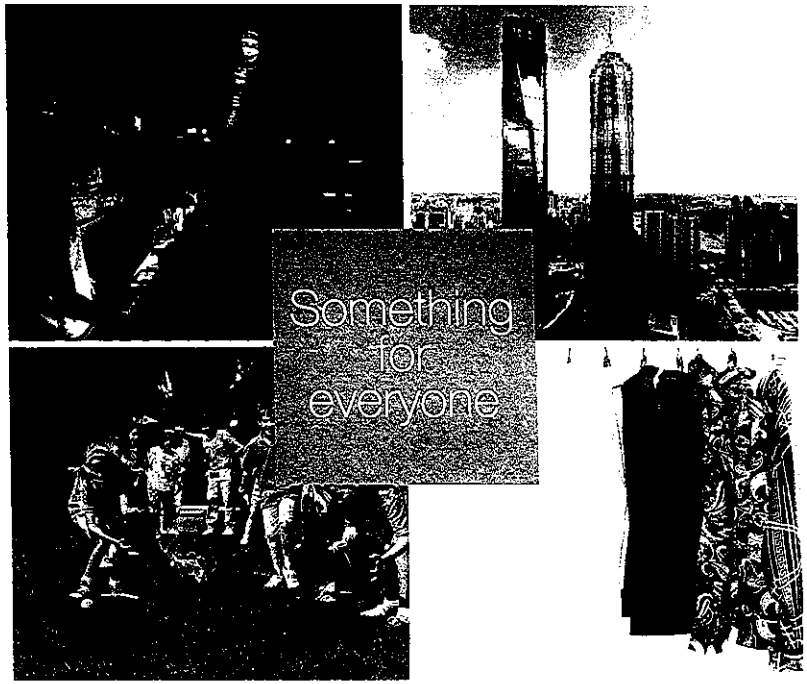
If the World Expo did not exist, architects would have every reason to invent it. Nothing comes close to matching the opportunity it provides for the uninhibited architectural imagination, at once liberated from narrow utilitarian considerations and abundantly resourced to create wonders for a vast, international audience. Among such wonders, none has achieved an enduring global celebrity remotely comparable to that of Gustave Eiffel's iron tower, built on the Champ de Mars beside the River Seine, to serve as the entrance arch for the World Expo of 1889 (marking the centenary of the French Revolution).

Eiffel first proposed the tower to the municipal authorities responsible for the Barcelona World Expo of 1888, but the design was rejected due to its extravagance and peculiarity. The Parisian authorities proved more adventurous and, of course, ultimately receptive, but even in that avante garde bastion the stark modernism of the design outraged the sensibilities of many citizens, including those of prominent intellectuals. Alexandre Dumas was among those to denounce it in print, while Guy de Maupassant detested it with such passion that he dined inside the tower every day – in order to be spared its sight. Nothing like the Eiffel Tower had ever been seen before, and within a decade it had transcended the Expo to become an iconic representation of Paris, and of France, as well as the most widely recognizable modern structure on the planet.

When the 300-meter tower opened on May 6, 1889, it was the tallest in the world, a status it held for over 40 years. It dominated the Paris Universal Expos of 1889 and 1900, and remained the city's loftiest structure into the 21st century.

Eiffel's design was translated into a structural plan by Maurice Koechlin, requiring 7,300 tonnes of metal, including over 18,000 pieces of puddled iron and 2.5 million rivets. Although the open structure of the tower presented an exceptionally hazardous construction challenge, Eiffel's meticulous precautions minimized loss of life (just one worker died).

The tower welcomed its 200 millionth visitor in 2002, an attendance figure unmatched by any other paid monument in the world. Among this number is Thomas Edison, who visited it during the 1889 Expo, on September 10, and wrote in guestbook: "To M Eiffel the Engineer the brave builder of so gigantic and original specimen of modern Engineering from one who has the greatest respect and admiration for all Engineers including the Great Engineer the Bon Dieu, Thomas Edison."



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The cresendo in the great romance between Paris and the World Expo arrived at the 1900 Exposition Universelle, held from April 15 to November 12 in the city's familiar Expo heartland, extending from the Champ de Mars to the Trocadero and down the Avenue des Invalides. Over the course of the event, the 112 hectare site hosting the attractions of 76,000 exhibitors welcomed more than 50 million visitors, setting an attendance record that would not be matched until 1967, and generating a a profit for the French government of 7 million Francs.

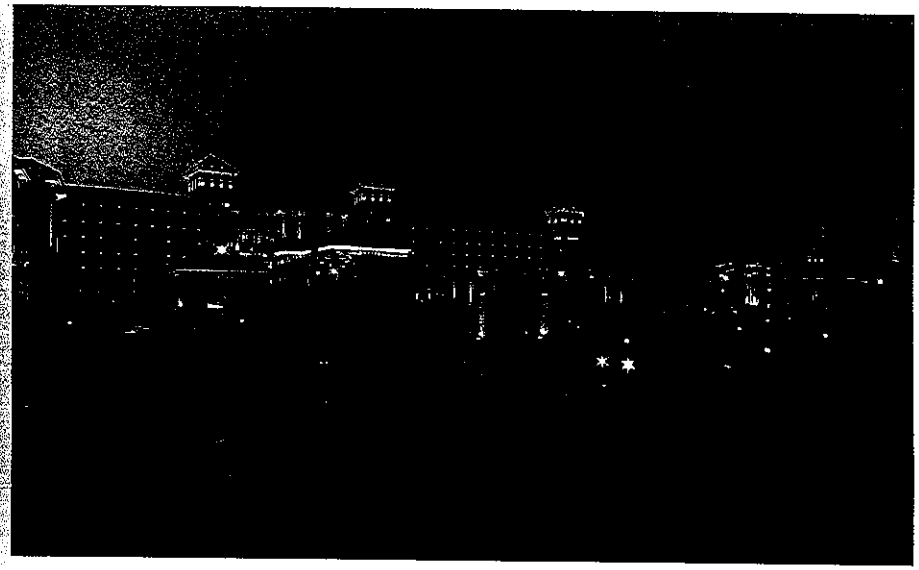
For Paris, the 1900 Expo was a profoundly transformative experience. The first line of the Paris Metro was opened according to the Expo schedule (entering into operation on July 19), and numerous landmark urban developments were inherited from the fair, including railway stations (the Gare de Lyon and Gare d'Orsay), the city's most exuberantly ornamental bridge, the Pont Alexandre III, and such treasured buildings as the Grand Palais, Petit Palais, and La Ruche.

The 1900 Expo was a cultural event of exceptional significance and coherence, woven together by the flowing lines of the Art Nouveau style, and technologically preserved by the first films, exhibiting opera and ballet recordings that included both image and sound. It also featured panoramic artworks, in paint and other media. Campbell's Soup was among the prize-winning consumer items at the Expo, where technological innovations included the first public demonstration of the escalator, a giant refracting telescope, and Rudolf Diesel's new engine design (running on peanut oil). France was scandalized when Russian sparkling wine beat all local competition to win the 'Grand Prix de Champagne'.

At the margins of the Expo, the modern Olympic Games took place for the second time, and the first outside Greece (see p.19). The games were spread over five months, and involved sports from tennis, football, polo, and rowing, to tug-of-war, with multinational teams, and the first participation by female athletes. Few observers could have imagined the eventual reversal of fortunes between these international events.

Although a Human Zoo was once again present at the 1900 Expo (this time entitled 'Living in Madagascar'), on this occasion it was counter-balanced by the more hopeful 'Negro Exposition'. This exhibit, part organized by Booker T. Washington and Edward Du Bois, included photographs by Frances Benjamin Johnston attesting to the positive contributions made by Americans of African ancestry to US society. ✖

INDULGE THE PASSION FOR LIFE



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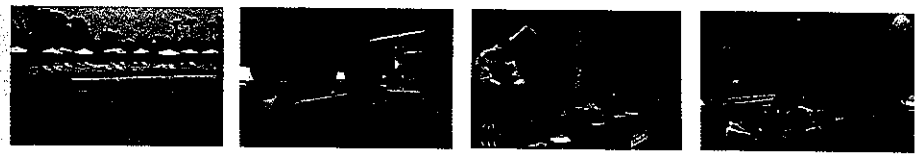

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Darkening **Skies**

By the early years of the 20th century, the World Expo had demonstrated a relentless capability to expand in scale, popularity, geographical reach, and topical relevance. Through the Expo, the modern world was able to examine – and enjoy – a condensed sample of itself, reflecting on the path taken and the road ahead. Yet, even as the magnitude of the event reached new heights, the classical age of the World Expo was entering its twilight. The self-reflection of industrial civilization was stealthily mutating into corrosive doubt, international storm-clouds were gathering after decades of comparative peace, the rampant growth and proliferation of Expos had overwhelmed their institutional underpinnings, and a new media landscape was arising, in which the Expo would struggle to adapt.

The first decades of the new century saw the idea of material progress that had animated and inspired the Expo since its inception begin to fray, and then to unravel. As the spirit of critical enquiry fostered by modernity continued to gather pace, it turned back upon the modern world and ruthlessly examined it. The tacit Expo agenda of technological and commercial progressivism that had once seemed almost unquestionable, was depicted with increasing harshness as a dubious ideology promoting an unwanted future. Socialists denounced its commodity fetishism, nationalists and proto-fascists its cosmopolitanism, romantic conservatives its vulgar consumerism, mass populism and technological determinism, anti-imperialists its Eurocentric arrogance. Such attacks, concentrated as they were among intellectuals, might have remained marginal and limited in their consequences, had not the decaying order of the world seemed to confirm the wildest and darkest social prophecies.

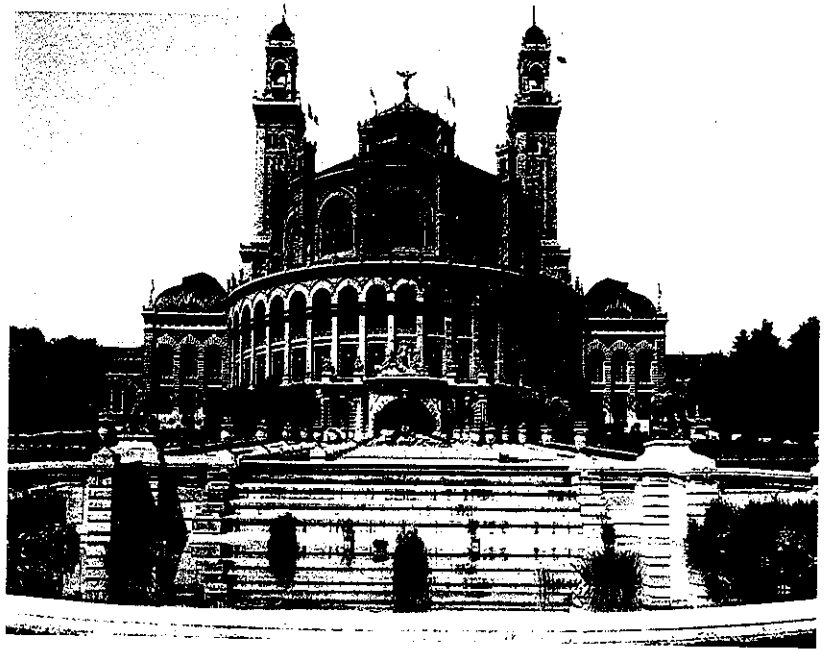
The historical development of the world expostion has been grounded in an assumed consonance of economic growth, scientific and technological advance, international cooperation and an irresistable universalism that accompanied global interconnectedness. Broad world trends had supported these assumptions since the origin of the Expo, indeed, since a six-decade epoch of Anglo-French world

war came to its end in 1815, at least in the eyes of European populations still untroubled by the colonial underpinnings of the modern world order, only moderately perturbed by the ominous downwards ratchet of Franco-German relations, and generally oblivious to the secular shift of geopolitical hegemony from modernity's European heartland to the New World. The rise of modernity and global interconnectedness had seemed scarcely distinguishable from the ascent of Europe, and confidence in continued European leadership had calcified into a complacent, at times even racist, presumption.

The first great wave of global modernity, along with all of its attendant illusions, reached its zenith in the early summer of 1914. Then came apocalypse. Over the course of three decades, Europe self-destructed, as war on a previously unimagined scale tore the continent to pieces, followed by plague, economic collapse, totalitarian revolutions, and war again, this time internalized by systematic genocide, even greater global expansion, and science fiction weaponry of cosmic potency. The sustaining Expo dream of a world united in peace and prosperity, nourished by scientific invention, dissolved into nighmarish confusion, as the seemingly relentless expansion and intensification of warfare perverted economic and technological capabilities into instruments of mass slaughter.

The Expo would remain a festival of modernity. It could be nothing else, and in the United States, where the ravages of war were outweighed by the exuberance of turbo-industrialization and new superpower status, raw Expo enthusiasm was still ascending to its peak. World Expos were held in St Louis (1904), Seattle (1909), simultaneously in San Francisco and San Diego (1919), and in Chicago (1933). The 1933 Chicago Expo, A Century of Progress, drew over 48 million visitors, and can be uncontroversially included among the great historical World Fairs. In Europe, however, where the horrors of the early- to mid-20th century were reinforced by the early glimmerings of relative decline, decolonization and new competitive challenges, the tone of the event had changed into something far more somber, anxious, and even apologetical. None of the European Expos of the first half of the 20th century, held in Belgium (1910, 1913, 1935), Italy (1911), and Spain (1929), drew more than 20 million visitors, except for the Paris Expo of 1937, Arts and Technology in Modern Life, which drew over 30 million visitors to an event overshadowed by Nazi and Soviet pavilions, whose exhibitions extolled totalitarian solutions to the decadence of modernity, and the sweeping clean of a ruined world. ✖

New Order

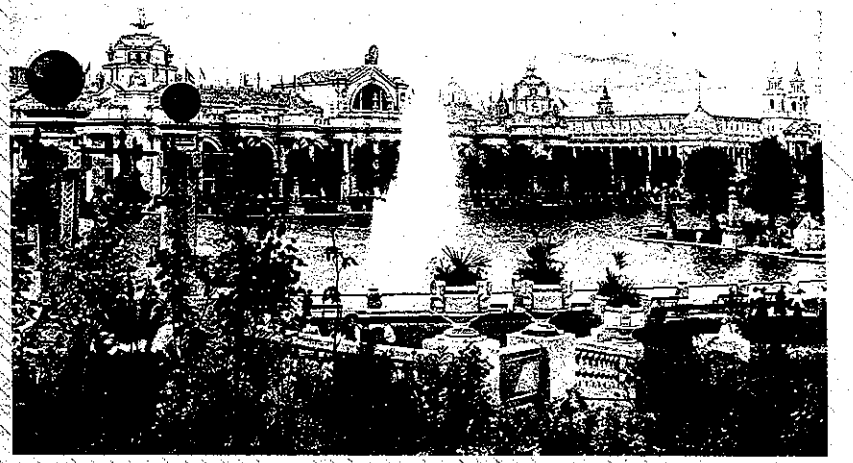


The interval between world fairs had tended to shrink throughout the early history of the Expo. The first four Expos were separated by intervals of four years, seven years, and five years, but subsequent gaps fell to four years, three years, and two years. Between 1878 and 1881, an Expo took place each year over the four-year period (the 1878 Exposition Universelle was followed by two Australian Expos, in Sydney 1879 and Melbourne 1880, and then by the Milan Expo of 1881). While this increasing frequency testified to the rising prestige of the Universal Exposition, it was also a symptom of institutional dysfunction and even of degeneration, courting debasement through over-exposure. Already by the late 19th century, Expo enthusiasm was becoming an uncontrollable, self-destructive torrent.

By 1907, France had begun to call for a formal international coordination mechanism to restrain the proliferation of exhibitions, arbitrate disputes and standardize rules. The progressively self-enlightening world that had always been presupposed by the World Expo was subsiding, however, and with it the first attempts to establish an international administrative framework adequate to the magnitude, frequency and significance of the event. Although groundwork for an international convention governing international exhibitions was laid at the Berlin Diplomatic Conference, initiated by Germany in 1912 and widely supported by the major world powers, these efforts came to naught. Just as the Expo was about to be brought within the ambit of international order, the international order collapsed into anarchy. Monstrous historical irony had set the ratification date of the agreement in 1914, coincident with the outbreak of the First World War.

Following the cessation of hostilities in 1918 and the signing of the Treaty of Versailles (in 1919), the world fair negotiations recommenced (in 1920), culminating in the Paris Conference of 1928 and a convention signed by delegates of 31 countries governing the organization and frequency of international exhibitions, along with the rights and obligations of hosts and exhibitors. The 1928 Convention also established a permanent international bureau to ensure compliance with its provisions: the Bureau of International Exhibitions, or BIE (see p.23).

The foundation of the BIE was a moment of recognition for the World Expo, but it also marked a loss of innocence. The spontaneity of youth yielded formally to the necessity of bureaucratic management, and the world historical meaning of the Expo – considered self-evident for over half a century – had been so degraded by the terrors of the times that mandatory themes were required to restore it. Even the resiliently optimistic (and, unsurprisingly, American) 'A Century of Progress', the first of the BIE stipulated themes, borne by the Chicago Expo of 1933, was unable to mask the damage to Expo confidence wrought by the unfolding crisis of industrial civilization, as war and economic collapse were compounded by ideological schism and the disintegration of hope into radically incompatible visions of the future. From the perspective of the Expo as an institution, the hugely successful New York fair of 1939-40 only deepened this crisis, by falling outside of the new BIE guidelines, and thus calling into question the hard-won international consensus on Expo organization. ✖



The eyes of the Fair are on the future – not in the sense of peering toward the unknown nor attempting to foretell the events of tomorrow and the shape of things to come, but in the sense of presenting a new and clearer view of today in preparation for tomorrow; a view of the forces and ideas that prevail as well as the machines. To its visitors the Fair will say: "Here are the materials, ideas, and forces at work in our world. These are the tools with which the World of Tomorrow must be made. They are all interesting and much effort has been expended to lay them before you in an interesting way. Familiarity with today is the best preparation for the future."

– official New York World's Fair pamphlet

1939-40: New York World's Fair

New York's first World Fair is a strong candidate for the most unfortunately timed Expo in history, taking place between the Japanese invasion of China and the attack on Pearl Harbor, coinciding with the German invasion of Poland, and marking the transition from the miseries of the Great Depression into the horrors of the Second World War. It also suffered from a scheduling clash with the Golden Gate International Exposition, held in San Francisco/Oakland at the same time, and lost BIE endorsement for overrunning the permitted six-month duration agreed for recognized Universal Expositions. Yet despite its ominous context, the 1939-40 New York World's Fair is counted among the most impressively memorable Expos ever staged, drawing over 45 million visitors (over its two years) and passing into popular mythology. Financially, it was a failure, however, losing US$19 million and bankrupting the Fair Corporation.

The Fair lasted for two six-month seasons, from April to October in each of 1939 and 1940. Its huge exhibition area, covering 492 hectares of Flushing Meadows-Corona Park, held the Expo record until 2010 and was served by a dedicated subway line, the IND World's Fair Railroad. Defying the darkness of the times with its slogan 'Dawn of a New Day' (changed to 'For Peace and Freedom' in 1940, as the war in Europe escalated), it is remembered above all for its bold futurism, as expressed through its World of Tomorrow and Futurama exhibits as well as the world's first science fiction convention (subsequently designated 'Nycon 1') and first 'time capsule'.

The event was conceived and planned by the New York World's Fair Corporation, which had been established by a group of retired police officers, led by former NY police chief Grover Whalen, who saw the fair as an opportunity to raise the morale of a depression-scourged populace. The idea was strongly supported by local business leaders, and by high-modernist master-planner Robert Moses, who embraced the fair as a vehicle for New York urban development. Promotional support was provided by the local baseball teams, and also by the tycoon-aviator Howard Hughes, who circumnavigated the world by air to advertise it. Both President Franklin D. Roosevelt and Albert Einstein participated in the opening ceremony, which included television broadcasting (an Expo first).

The Fair was divided into color-coded theme zones (a Transportation Zone, Communications and Business Systems Zone, Food Zone, Government Zone, and others). The buildings were extravagantly innovative, with architects positively goaded into flamboyant experimentation. This spirit was epitomized by the Theme Center, designed by Wallace Harrison and Max Abramovitz, which was dominated by two hypermodern visionary edifices, colored pure white, that seemed to have escaped from a science fiction fantasy: the (210-meter) Trylon and the Perisphere. A moving walkway inside the Perisphere carried visitors past an elaborate model 'city of tomorrow'. Throughout the site, spectacular multicolored electric lighting, employed on an unprecented scale, augmented the 21st century effect.

The dominant style of the fair built on the futuristic aesthetics of Art Deco and streamlining, expressed with protean flexibility in everything from buildings and vehicles to items of household consumption. Television was still an impressive novelty, and other groundbreaking technologies included a speech synthesizer (Bell Labs' Voder), color photography, nylon, air conditioning, an automatic dishwasher, the View-Master, and Smell-O-Vision, and Elecktro (a walking, talking robot). The IBM Pavilion presented electric typewriters and calculators.

Additional attractions included Vermeer's The Milkmaid from Amsterdam's Rijksmuseum (among 300 priceless artworks from around the world), the Lincoln Cathedral copy of Magna Carta, and a full-scale duplicate of Moscow's Mayakovskaya subway station. There was a 'Superman Day' (held on July 4, 1940), a Jewish Palestine Pavilion that prefigured the existence of Israel, a huge globe and planetarium, Aquacade musical swimming performances, and 'Frank Buck's Jungleland' (with trained orangutan, performing elephants and camels rides). An extremely popular Amusements Area presented such semi-legal vulgarities as Frozen Alive Girl, the Dream of Venus Building, and Living Pictures, as well as a Lama Temple show, where visitors were educated in the ways the celibacy of Tibetan monks were tested by "love temptation dancers" whose performance reached "the apogee of oriental choreography."

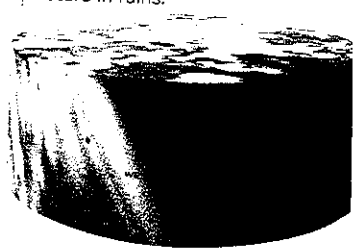
Perhaps the most impressive exhibit was found in the Transportation Zone, where General Motors' 3,300-square-meter Futurama simulated a journey through a future America, by way of an immense diorama that incorporated 500,000 houses and 50,000 vehicles. Visitors zoomed into the display on mobile chairs, until stopping beside a life-size car showroom (see p.271).

Buried Memories

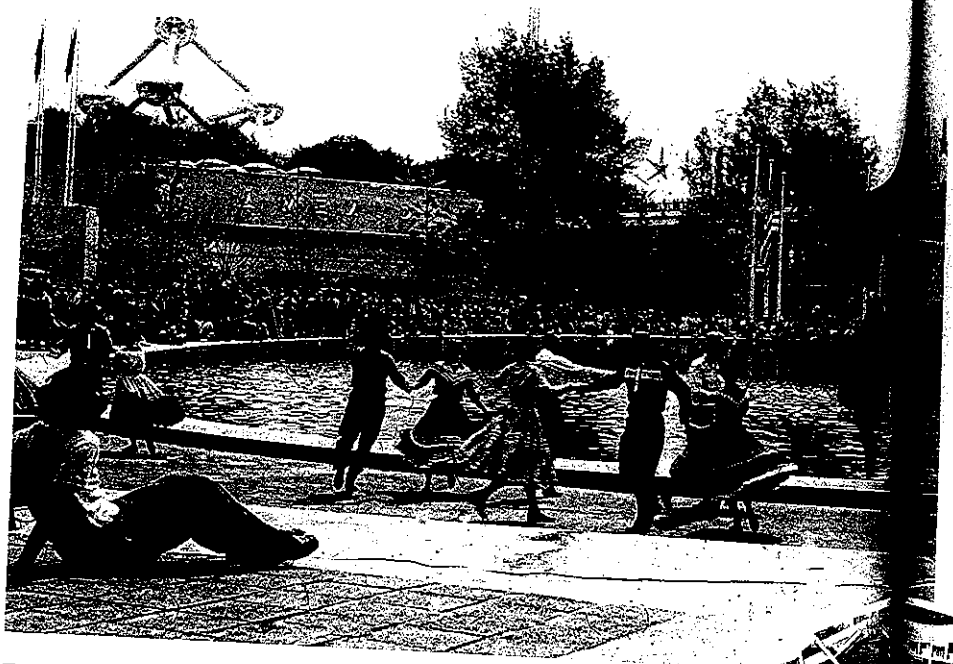
An influential innovation at the 1939-40 New York Fair was the Westinghouse Time Capsule, designed to project contents of future archaeological interest forward 5,000 years in a corrosion-resistant tube filled with inert gas. It was buried 15 meters underground, with instructions that it be opened in the year AD 6939. In 1964 the first Westinghouse capsule was joined by a second, despatched from that year's New York World Fair, but with the same destination date. Both capsules contained millions of pages of microfilmed text, books and magazines, currency, consumer items, fabrics, metals, plastics, and seeds of important crops. A granite 'sentinel' bearing a small stone plaque marks their position in Flushing Meadows. George Edward Pendray coined the term 'time capsule' for the exhibit.

To facilitate future discovery, a Book of Record was produced, describing the capsule contents and printed in an edition of 3,000, with copies distributed to museums, monasteries, and libraries worldwide. A supplement was added when the second capsule was interred. The book includes a request that it be translated into new languages as they develop, along with a key to teaching English to archaeologists unfamiliar with the language, employing a phonological 'mouth map'.

The contemporary meaning of these time capsules is open to multiple interpretations. They clearly represent the extreme future-orientation of the mid-20th century US World Fairs, and even extend their audience, by way of an exhibition that reaches out to a distant age. Yet the implicit expectation of drastic cultural discontinuity – however realistic – is indicative of the anxiety of the times, as if the present were being perceived through the lens of impending catastrophe. Whatever else they may be, time capsules are armored messages that anticipate a future in ruins.



The Age of **Ambivalence**



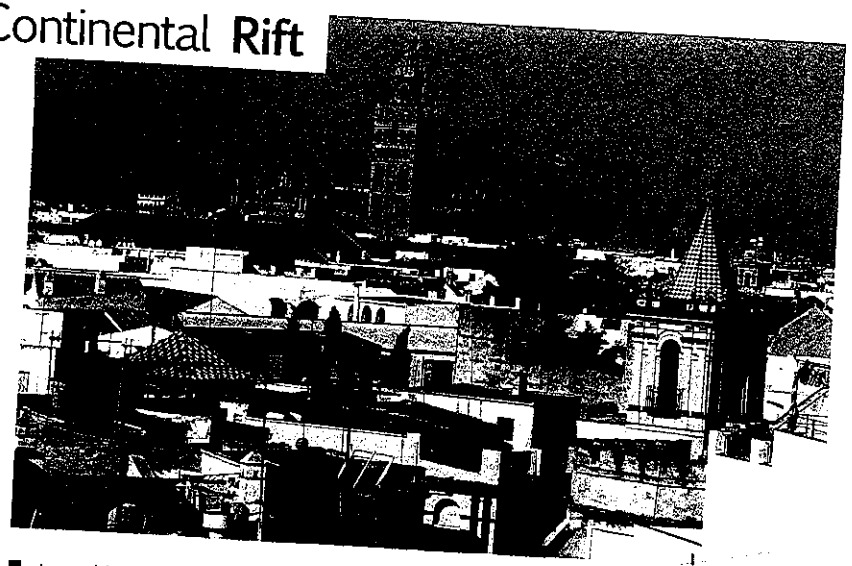
The cultural prestige of the Expo has been closely bound to that of modernity, based upon a broad public apprehension of social progress, driven by cumulative technological and economic advances within an increasingly interconnected world. Naturally enough, the waning of the Expo has almost perfectly tracked the waxing of a 'postmodern' sensibility, characterized by extreme skepticism in regards to progress (and almost everything else), hyper-attentiveness to the social and environmental costs of growth, deep distrust of business and of science, pessimism about the implications of global integration, and puritanical disdain for material improvement. For the postmoderns, the process of modernization was at the very least an object of agonizing ambiguity, and more typically a target of fervent denunciation. While postmodernism was never a truly popular mode of thinking, it captured a mood of generalized disenchantment far wider than its abstruse academic instantiations might suggest. In essence, it was the expression of European civilizational anguish, moderated by humor, fatalism and a strangely eroticized humility, numbed by ideological rancor, and adapted to social systems saturated – and seemingly 'derealized' – by broadcast media communications.

The 1958 Brussels World Fair (themed 'A More Human World') was the first major Expo to follow the Second World War, the first of the Cold War, and the last to be hosted in Belgium, concluding a series of 11 that began in 1897, including five in Brussels. It also deserves historical status as the first postmodern Expo, because its reception was dominated by commentary that pointedly questioned its relation to reality. For German critic Werner Hofmann, it epitomized "architecture as a substitute for reality" in which built structures served as a kind of rhetorical effect, rather than a grounding in genuine fact. The 'realization' of vision in actual structures only made the underlying fantasy more convincing, and thus deceptive. Tellingly, Hofmann extended this diagnosis to the Expo in general, remarking that: "Every world exposition recalls the Tower of Babel and an announcement of the new Jerusalem. What they offer the eye are documented dreams, which are not based on the floor of hard facts but which give the fictive the justification of the actual."

The 1958 Expo was officially opened by Belgian King Baudouin I, who adhered scrupulously to Expo traditions with a call for world peace, social progress, and economic advance. Visitor numbers reached 42 million, more than double the level of any previous Belgian Expo. Yet despite this impressive figure, and a light, festive atmosphere, it was at Brussels 1958 that the Expo lost its claim upon the future in the eyes of the educated public, as the previously marginal criticism of anti-modernist intellectuals found itself echoed and amplified into reverberating derision. The specific trigger for this near-lethal transformation was the architectural highlight of the Brussels Expo, the Atomium in Heysal Park, a 102-meter-tall structure consisting of nine reflective steel spheres, mirroring the unit cell of an iron crystal under 165-million-fold magnification. In the eyes of a post-Hiroshima, Cold War world, seemingly poised on the brink of nuclear apocalypse, this glistening sculptural paean to the wonders of the atomic age had carried the traditions of Expo optimism and technophilia into psychologically unsustainable regions. However unfairly, articulate visitors did not recognize plausible global prospects in this monument, but rather a flight into utopian escapism, the depiction of a 'future' that had degenerated from a productive forecast into preposterous – and almost insulting – delusion. Karl Pawek thought the 1958 Expo seemed to have been "invented by psychoanalysts in order to take away people's fear of the 'atom'."

This sense of jarring unreality was compounded by an exhibit devoted to developmental progress in Belgium's African territories, at a time when anticolonial movements were making steady advances worldwide, and just two years before the achievement of Congolese independence (on June 30, 1960). Far from anticipating impending events, the Expo seemed to have supplanted them with pleasant, yet patently hallucinatory, alternatives. This environment of unreality had its positive aspects. Techniques of simulation and sensory manipulation attained new heights, especially in the magnificent 'Poème électronique' composed by Edgard Varèse. This work fused music and architecture in a sonic installation, consisting of 425 loudspeakers deployed in the Expo's Philips Pavilion, a building designed by acoustic pioneer Iannis Xenakis (under the employ of Le Corbusier). It was to be the last sound of a European Expo for over three decades. ✖

Continental **Rift**



It would be 34 years before the World Expo returned to Europe. Throughout the 1960s, '70s, and '80s, its geographical homelands were to be found exclusively in the New World and the Pacific, as represented by Expos in the United States (Seattle 1962, New York City 1964-5, San Antonio 1968, Spokane 1974, Knoxville 1982, and New Orleans 1984), Canada (Montreal 1967, and Vancouver 1986), Japan (Osaka 1970, Tsukuba 1985), and Australia (Brisbane 1988). Only three of these events can be considered truly large scale, when judged by previously established Expo standards.

The slow-motion crisis of the Expo in the second half of the 20th century resulted from underlying plate tectonics, deep shifts of inexorable power that were reconfiguring the order of the world. Almost immediately after the Expo had been institutionalized on a European model, successive geopolitical catastrophes struck the continent, bringing an end to its status as the heartland of Expo organization. Yet in the World Expo's primary place of refuge, the United States, forces of disinstitutionalization predominated. The great New World expositions threatened to decouple entirely from the international consensus reached at the 1928 Paris Convention, reverting to older and more anarchic realities, flowing unbidden from the impulses of manifest destiny.

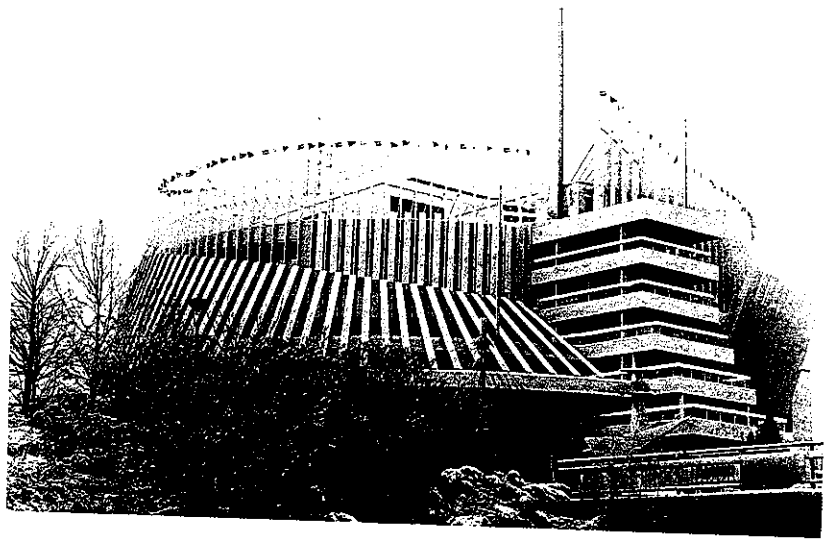
The critical quake zone was New York City, with a tradition of defiance to BIE leadership dating back to the World Fair of 1939-40 (see pp.110-1). From the perspective of the BIE and the constituencies it represented, this precedent was particularly ominous, because the largest and most advanced city of the age seemed to be inaugurating an Expo lineage of its own, indifferent to the imperative for international coordination that had seemed so pressing to the framers of the Paris Convention. A quarter of a century later, fresh shocks widened the chasm further, when another New York World Fair, of comparable epic scale, raised disregard for BIE guidance to the point of rancorous public controversy.

The New York Fair of 1964-65 was espoused by New York business leaders with fond childhood memories of the 1939-40 Fair and high expectations of the economic benefits that would flow from a repetition. They were supported by New York City

Mayor Robert Wagner, who commissioned feasibility studies from Expo producer and scholar Frederick Pittera (International Fairs & Exhibitions authority for the Encyclopaedia Britannica and Comptons Encyclopedia) and Austrian architect Victor Gruen, known as the inventor of the shopping mall. Based on these studies, the Eisenhower Commission selected the city to host the event, in the face of fierce competition from other US cities. New York master planner Robert Moses, who had been central to preparations for the 1939-40 Fair, was chosen to head the effort. For Moses, this second New York Fair of the 20th century would complete the work of the first and contribute to the overall reconstruction of the city, but his zealous vision of the fair, its economics, and its role in the development of New York, was set on a direct collision course with the BIE and the ideal of the Expo as a rule-governed international institution.

The Moses plan for the New York Fair contradicted core BIE regulations in at least four respects. The date was unacceptably close to those of already scheduled events in Seattle (1962) and Montreal (1967), and the near-overlap with the Seattle fair conflicted with a prohibition against more than one Expo taking place within any country in a single decade, in addition, the idea of a two-year run directly violated BIE rules, as did the proposal that exhibitors be charged rental fees for their pavilion plots. Moses traveled to Paris to try to win over the Bureau, but the differences were too wide to bridge. He then escalated the argument by appealing to news media over the heads of the BIE, denouncing the organization's rules, and defiantly pledging to ignore them. The BIE retaliated by denying its endorsement and furthermore, in a dramatic counter-escalation, formally requesting that its member countries boycott the New York event (which nevertheless described itself as a 'Universal and International' exposition). World Expo had deteriorated to a stage of hostile schism, analogous to civil war.

For any other city, a world fair would have been unthinkable under these conditions. Not only were all the large European countries, along with major Anglophone countries (Australia and Canada), and the USSR, united behind the boycott, but, in addition, the attention, energy, and resources of potential participants and visitors



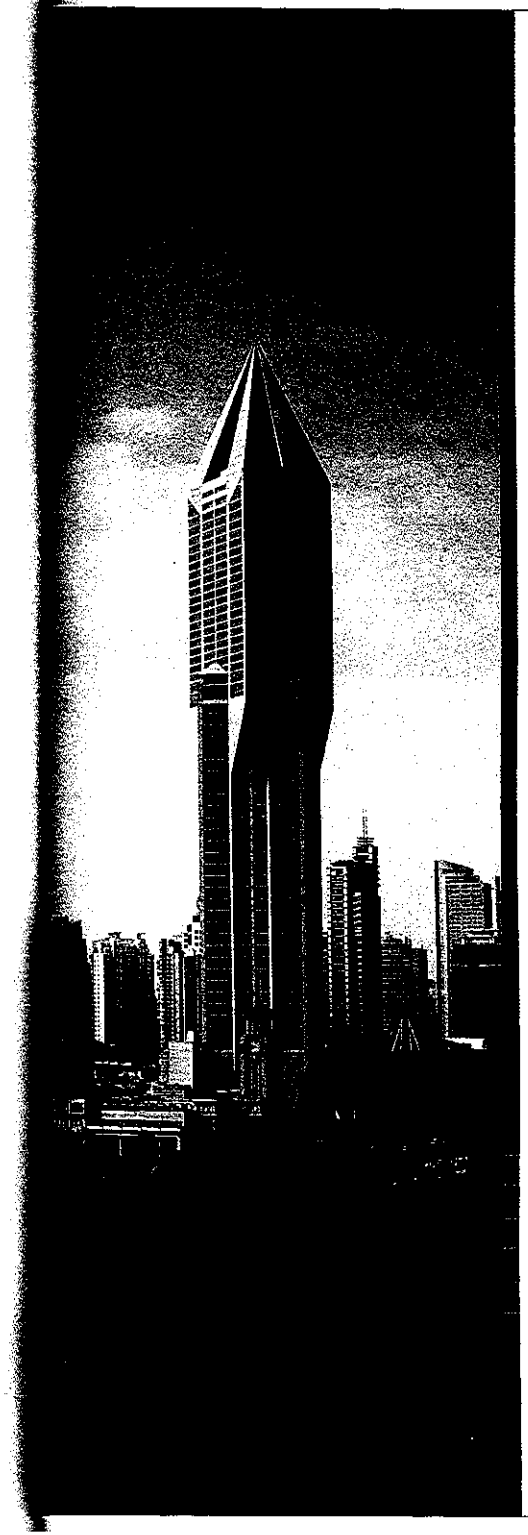
were distracted by the near coincidence of alternative – and officially recognized – fairs (the impending 1967 Expo in Montreal, and smaller 1962 Expo in Seattle). New York was not any other city, however. In the mid-1960s it was by far the world's largest metropolis, market place, and unchallenged financial center, with an economic weight greater than all but a few sovereign nations, and enormous reserves of multidimensional 'soft power' (in the form of media, arts, advertising, intellectual production, and global image). For strong US allies, especially the smaller nations most dependent upon the relationship, the importance of BIE endorsement was overwhelmingly outweighed by that of making a positive impression in the city, one that many considered the capital of the world. Austria, Denmark, Greece, Spain, Sweden, and the Vatican City were among the European countries that participated, along with US friends and neighbors including Japan, Jordan, Mexico, Pakistan, the Philippines, and Thailand. In some other cases, overseas trade and tourism organizations substituted for official national representation.

The 1964-65 New York World's Fair was staged on the same Flushing Meadows Corona Park site in the Borough of Queens that had been used by the World Fair of 1939-40, and like that fair, it ran for two six-month seasons in consecutive years, opening on April 22, 1964, and concluding on October 17, 1965. Its theme of 'Peace Through Understanding', elaborated as 'Man's Achievement on a Shrinking Globe in an Expanding Universe', was expressed architecturally in an immense steel globe called the Unisphere. Total attendance over the two seasons exceeded 51 million (although 70 million had been required for financial solvency).

Highlights of the fair ranged from food items (the first 'Belgian Waffle') and arts (especially Vatican exhibits and independant films), but the industrial might of corporate America dominated the event. General Motors Corporation expanded upon its Futurama exhibit from the New York fair of 1939-40, taking a new generation into the automotive near future (no less than 26 million people took the ride). IBM introduced the latest computer applications, and Bell did the same for telephony (including an early computer modem). Amongst youngsters the distant past was the greatest draw, in the form of the Sinclair Oil Corporation's Dinoland, featuring life-size model dinosaurs. The Westinghouse Corporation deposited its second time capsule (see p.111). Space technology was prominently displayed.

The Walt Disney Company was a special star of the Fair, creating four shows that utilized its 'audio-animatronics' system of robotic performance: 'It's a Small World' (at the Pepsi pavilion), 'Progressland (for General Electric), 'The Magic Skyway' (for the Ford Motor Company), and 'Great Moments with Mr. Lincoln' (at the Illinois pavilion). The Fair served Disney as a test bed for its permanent Disney Theme Parks (see p.53). Walt Disney World inherited versions of 'It's a Small World' and the Carousel of Progress from the Fair, part of the Magic Skyway was reconstructed beside the Disneyland Railroad, the Epcot Center paid explicit tribute to the event, and audio-animatronics became a staple of theme park attractions. While easily overlooked in accounts of World Expo history, this birth of autonomous theme parks would seriously afflict the mother event (see p.121).

Fortunately for the Expo as a formal international institution, the two New York World Fairs of the 20th century proved to be an anomalous digression from the mainstream of Expo history, rather than a fertile schismatic lineage. After 1965, no other major exposition would be held without BIE endorsement, and the centrifugal forces of American Exceptionalism were expressed in different, more containable ways (see pp.96-7). Unfortunately, however, the disappearance of unofficial competitor events owed more to the continued unfolding of Expo's institutional crisis than to any resolution of its basic problems. ✖



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Goodbye to All That

Even beyond Europe (where the Expo spirit had been almost entirely extirpated), the confluence of four deep trends relentlessly dampened Expo exuberance from the 1960s onwards. Firstly, a mismatch between Expo periodicity and the demands of techno-commercial promotions yawned abysmally, as innovative communication systems and tightening production cycles carried inventors and businesses into new, high-frequency media. An event held just twice each decade seemed to lack the responsiveness required by electronically-accelerated modern industries, and the Expo-enthusiasm of producer groups declined accordingly. As governments took up the slack, shifting the promotional emphasis of the Expo from innovative products towards national brand-building and international causes, vibrant commercial spontaneity withered further. The entrepreneurial wellsprings of Expo vitality were drying up.

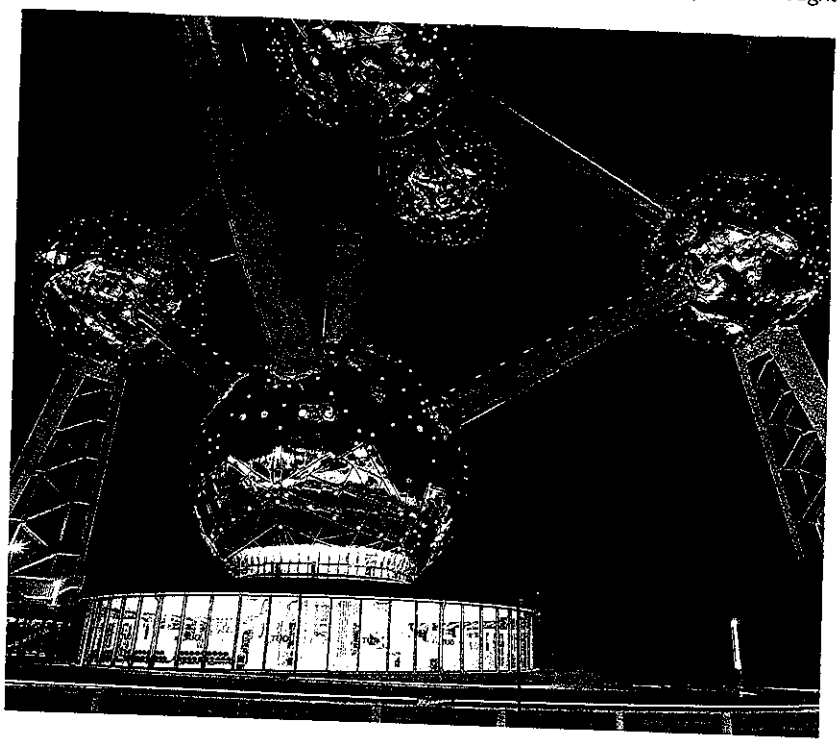
A second tendency was directly interwoven with the first. The administrative elites staffing national Expo missions and intergovernmental organizations were relatively unfamiliar with the rough-edged hubbub of the marketplace, and highly susceptible to the post- and anti-modernist intellectual currents that rose to a position of ever greater dominance in Western academic circles. The sociological trend in Expo management, as business leaders and engineers made way for professional administrators, brought a pronounced Expo scepticism into the heart of the institution, and something close to a bad conscience – at times almost a structural cringe – corroded its sense of purpose.

By supreme historical irony, an antimodernist high culture, deeply suspicious of commercial and technological impulses, economic growth, and creative destruction, found itself ensconsed within the principal festival of industrial modernity. An unmistakable defensiveness entered into the Expo's self-representation, accompanied by the gradual substitution of earnest moral purpose and technocratic sobriety for innocent (or 'vulgar') delight in the marvels of novelty and exoticism, machines, trade goods, and foreign customs. The Expo was no longer content to

represent the glorious, shocking tumult of modernity in general, but sought instead to seriously engage problems of development planning and governance, through an agenda that emphasized the social and environmental 'collateral damage' of growth. Whatever the merits of this institutional maturation, the loss of popular appeal and carnival attraction were substantial. When judged by attendance figures and international profile, secular decline took hold, disguised during the years 1967-70 by two Expo episodes of peculiar organizational brilliance (see pp.122-5).

This tendency towards negotiated ambivalence and didacticism can be detected in the evolution of Expo themes, which reflect a gathering uncertainty about the course and legitimacy of the modern world. Sweeping affirmations of modernity such as 'Industry of all Nations' (London, 1851), 'Evaluation of a Century' (Paris, 1900), 'A Century of Progress' (Chicago, 1933-4) and 'Building the World of Tomorrow' (New York, 1939-40) give way to the morally charged and pedagogic topics of more recent years, as exemplified by 'A More Human World' (Brussels, 1958), 'Progress and Harmony for Mankind' (Osaka, 1970), and 'Nature's Wisdom' (Aichi 2005). While this change in thematic tone is typically subtle and could easily be over-interpreted, it nevertheless exhibited a number of unmistakable features. Retrospective celebrations (frequently centenial in nature) are replaced by prospective declarations, marking a shift from a descriptive to a prescriptive register that at times amounts almost to the advance of a political program.

No longer simply aligned with the inherent momentum of modernity, the Expo increasingly took on a dutiful, piloting role. Since its inception, the Expo had sought



to accelerate the process of modernity, but the idea of historical course-correction was deeply alien to its original platform, and it was this idea that steadily rose to prominence in Expo thematics. In this regard, the rising influence of the United Nations and attendant intergovernmental bureacracies, with their activist motivations, and ambiguous attitudes to the spontaneous direction of modern history, was quite clearly apparent.

The popularity of World Expo was progressively sapped by the irreversible decay of Eurocentric modernity, by technological and economic flight to alternative platforms, and by the response of a (predominantly European) administrative elite receptive to antimodernist opinion, attitudes, and exhortations. At the level of popular culture, however, these factors were hugely outweighed by a more positive development: the emergence of alternative international attractions that sidelined the World Expo as a medium of mass entertainment.

Over the course of the 20th century, two international sporting events, the Olympic Games (from 1896) and the FIFA World Cup (from 1830), rose gradually but inexorably in importance. While the 1900 Paris Olympics were overshadowed by that year's World Expo to the point of near-invisibility, by the end of the century the relative status of the Expo had declined to such an extent that it was considered flattering to describe it as the 'Olympics of economics and technology' (see p.19).

This development was at the very least reinforced by (and perhaps entirely dependent upon) the global spread of broadcast media, and especially television, in the post-war years. The immersive environment of the World Expo, widely scattered in space and time, defied televisual capture. Sporting events, in contrast, enjoyed an enormous advantage in the new medium. Their races, matches, and competitive displays were relatively compact in space and duration, and thus suited to broadcast scheduling, while their dramatic tension and structure, stars, clear rules, decisive results and appeals to tribal loyalty combined to produce a seemingly unbeatable entertainment package. The economic tripod of sport, TV and advertising ensured that feedback effects would accentuate these advantages, by channeling revenue streams to teams, organizers, and broadcasters that reached and held the largest audiences. The resulting, explosive growth was driven by the dynamically

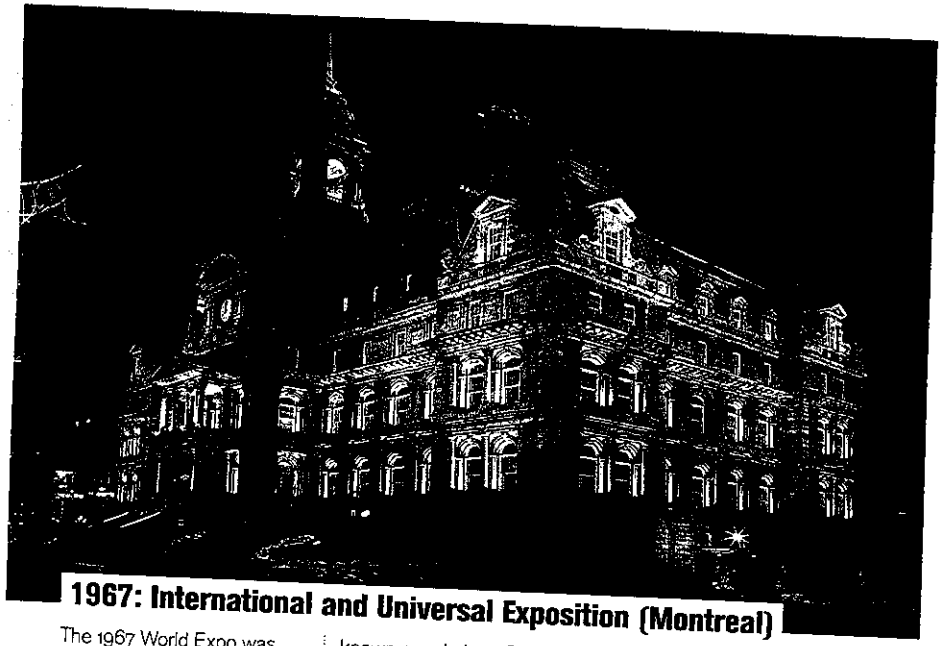
self-amplifying loops of media economics, which the World Expo has never come close to instantiating.

A fourth, and final, blow to the popularity of World Expo was delivered by the emergence of permanent theme parks, competing with the event on its home terrain of immersive mass entertainment. Pioneered by Walt Disney in the 1960s, based on direct Expo experience, theme parks of all kinds mushroomed during the late 20th century. By the early years of the new millennium, the global theme park industry was drawing over a quarter of a billion visitors each year, with nearly 200 million people visiting the world's top 25 theme parks alone. In large measure, these stupendous numbers were the World Expo crowds of yesteryear, flocking to the greatest show on earth.

Confronting these developments, Expo governance fell prey to a profound sense of resignation. The long-term decline in the World Expo's technological and economic relevance was accepted as irreversible, as was the erosion of its mass appeal in the age of broadcast media, along with the collapse of international popular and media attention (a trend that was turning World Expo into an international event with a national audience). Even in the eyes of its strongest supporters, the Expo was seen as an enormously diminished institution, surviving through re-invention as something more localized, and also more idealistic, vaguer in its portrait of the world but also more directedly inspirational. It had become, above all, a diplomatic opportunity, gracefully detached from the practical main current of the world. ✖

In Terre des Hommes, his haunting book, so filled with dreams and hopes for the future, Antoine de Saint-Exupéry writes of how deeply moved he was when, flying for the first time by night alone over Argentina, he happened to notice a few flickering lights scattered below him across an almost empty plain. They "twinkled here and there, alone like stars."...In truth, being made aware of our own solitude can give us insight into the solitude of others. It can even cause us to gravitate towards one another as if to lessen our distress. Without this inevitable solitude, would there be any fusion at all, any tenderness between human beings? Moved as he was by a heightened awareness of the solitude of all creation and by the human need for solidarity, Saint-Exupéry found a phrase to express his anguish and his hope that was as simple as it was rich in meaning; and because that phrase was chosen many years later to be the governing idea of Expo 67, a group of people from all walks of life was invited by the Corporation to reflect upon it and to see how it could be given tangible form.

– Gabrielle Roy



1967: International and Universal Exposition (Montreal)

The 1967 World Expo was originally to be hosted by the Soviet Union, as a celebration of the 50th anniversary of Russia's Bolshevik revolution. The USSR declined the opportunity, however, in what retrospectively appears as a significant indicator of collapsing social confidence, combining doubts about the country's financial capacity to successfully stage the event with a sense of ideological vulnerability to an influx of foreign participants and visitors. Canada was selected as replacement host on November 13, 1962, with Toronto as proposed location. When Toronto balked at the potential expense, Montreal, under the leadership of Mayor Jean Drapeau, stepped up to the occasion.

Marking the centenary of Canadian national unification, Montreal's 1967 International and Universal Exposition, known popularly as Expo 67, was held in the capital of the country's francophone province of Quebec, from April 27 to October 29. Prior to the 2010 World Expo, it drew the third largest audience in Expo history, an especially remarkable feat given the country's relatively small population (just 20 million at the time). Attendance exceeded 50 million and a new single-day record of 569,000 visitors was set on its third day. The opening ceremonies, broadcast via satellite, reached an audience of over 700 million worldwide. A total of 62 nations participated, and eminent guests included Queen Elizabeth II, Lyndon Johnson, Princess Grace, Jacqueline Kennedy, Robert F. Kennedy, Haile Selassie, Charles De Gaulle, Bing Crosby, Harry Belafonte, Maurice Chevalier, Maharishi Mahesh Yogi and Marlene Dietrich.

Infrastructural preparations took place on a scale so enormous that local media described the event as "the most staggering Canadian achievement since this vast land was finally linked by a transcontinental railway." Islands were expanded and created in the St. Lawrence river and the new Concorde Bridge built to connect them, along with water-transport facilities and a dedicated mass transit system (the Montreal Expo Express). The original C$167 million construction budget had exploded to C$439 million by the opening date (contributing to an eventual deficit of over C$200 million). Despite heroic efforts, some of the principal structures – most notably the Habitat 67 housing complex, designed by Moshe Safdie – were still incomplete when the Expo opened.

The Expo was themed Man and His World, referencing Antoine de Saint-Exupery's 1939 book Terre des Hommes (translated as Wind, Sand and Stars). The spirit of the Expo was relentlessly humanistic, reflected in 'theme elements' that included Man and his Health; Man in the Community; Man the Explorer; Man the Creator; Man the Producer; and Man the Provider. By subsuming the traditional Expo agenda of hard-edged (techno-commercial) material advance into this softened humanistic framework, Expo 67 sought to defang the rising tide of anti-modernist criticism, evade ideological controversy, and reclaim the event's progressive credentials – with notable and highly influential success.

Expo 67 also represented a confluence of the event's historical anglophone and francophone currents (see p.88). Staged in a majority French-speaking province within a majority English-speaking country, the geographical symbolism was inescapable. Canada's national historian Pierre Berton ascribed the success of the event to cooperation between French-Canadian flair and English-Canadian pragmatism (while apologizing for the crudity of these stereotypes). The huge enthusiasm for the event within the country is at least in part attributable to the way it overcame, at least momentarily, the 'Two Solitudes' of its dominant communities. Threats by militant Quebec separatists (the FLQ) to disrupt the exhibition came to nothing, and even French President Charles De Gaulle's provocative cry "Vive Montreal. Vive le Quebec.Vive le Quebec Libre!" earned nothing more than a mild rebuke from Canadian Prime Minister Lester B. Pearson, who remarked: "Canadians do not need to be liberated, Canada will remain united and will reject any effort to destroy her unity".

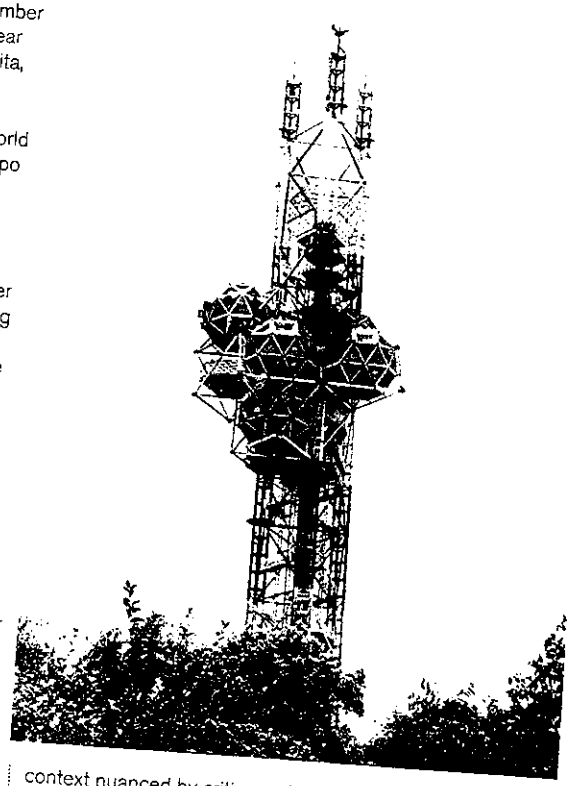
With the US-USSR Space Race (1957-69) approaching its lunar climax, space technology occupied a commanding position in the Expo imagination, with a pavilion of its own under the Man the Explorer subtheme. Externally, however, the most impressive of the 90 featured pavilions was the geodesic dome designed by Buckminster Fuller. Among the national pavilions, that of the USSR was the most popular, visited 13 times over the six months of the event, followed by those of Canada (11 million), the United States (9 million), France (8.5 million), and Czechoslovakia (8 million). The associated World Festival of Art and Entertainment brought visual, performing and – above all – musical arts, including such popular acts as the Grateful Dead, Jefferson Airplane, and Thelonious Monk. Mary Quant's miniskirt was introduced at the UK Pavilion, and within months hem lines were climbing across the site. An Expo amusement park (La Ronde) remained open for hours after the site closed each night at 10pm, and survived the Expo to become a permanent addition to the city.

Despite simultaneous wars in Viet Nam and the Middle East that brought limited protests, problems with the accomodation of visitors in private homes, and a highly disruptive local transport strike (in September) that reduced attendance by as many as 10 million, Expo 67 was acclaimed generally as an organizational triumph, as well as a masterpiece of re-branding that adapted the event to a skeptical and querulous age. In the year 2000, the Montreal Expo site park was renamed Parc Jean-Drapeau to honor the mayor's achievement. The Buckminster Fuller dome still exists today, preserved as an environmental sciences museum (called Biosphere). Additional surviving buildings include the Habitat 67 residences and the Canada pavilion.

A final ironic episode attaches to the story of Expo 67. Having overcome great practical challenges, and even greater cultural resistances, to revitalize a deeply imperilled international institution and re-ignite a sense of historical optimism, it nevertheless contributed to the imagery of a future in ruins. As the Expo site slid into disrepair it was embraced by the movie industry as a backdrop for post-apocalyptic dramas, including Robert Altman's bleak Quintet (1979) set in a world devastated by a new ice age, and the 'Greetings from Earth' episode of Battlestar Galactica (broadcast in the same year), where it represented a city annihilated by biological weapons.

1970: Japan World Exposition (Nippon Bankoku Hakurankai)

The first World Expo to be staged in Asia was held from March 15 to September 13, 1970, on Senri Hill, near the Osaka suburb of Suita, Japan. Marking Japan's rapid rise to economic prosperity, the Japan World Exposition (known as Expo 70) was the most heavily attended Expo in history up to 2010, attracting 77 participant countries, 186 foreign exhibitors, and over 64 million visitors, including 1.7 million from overseas. Over 835,000 visitors were received on September 5 alone.



The Expo theme was the determinedly humanistic Progress and Harmony for Mankind, but the thematic character of the event was more significant for the unprecedented attention devoted to environmental issues. The bamboo-forested artificial city of Suita was built as a green showcase, combining sophisticated mass transit systems, ecological land management and anti-pollution technologies. In addition, East Asian traditional values were strongly emphasized, announced thematically in the moderation of 'progress' by 'harmony', and incarnated architecturally in widespread employment of Japanese garden designs, among other features. The overall intention, as in all of the 'postmodern' Expos, was to present and appraise technological and commercial advances within a context nuanced by criticism, cultural pluralism, and sensitivity to non-economic costs. This late 20th century Expo sensibility reached an apogee at the event.

The Expo was organized by the Japan Association for the 1970 World Exposition, under its president Taizo Ishizaka. Site planning was assigned to Japanese architectural star Kenzo Tange (1913-2005), designer of the 1949 Hiroshima Peace Memorial Park and the 1964 Summer Olympics' Yoyogi National Gymnasium, and later winner of the 1987 Pritzker Prize (architecture's highest award).

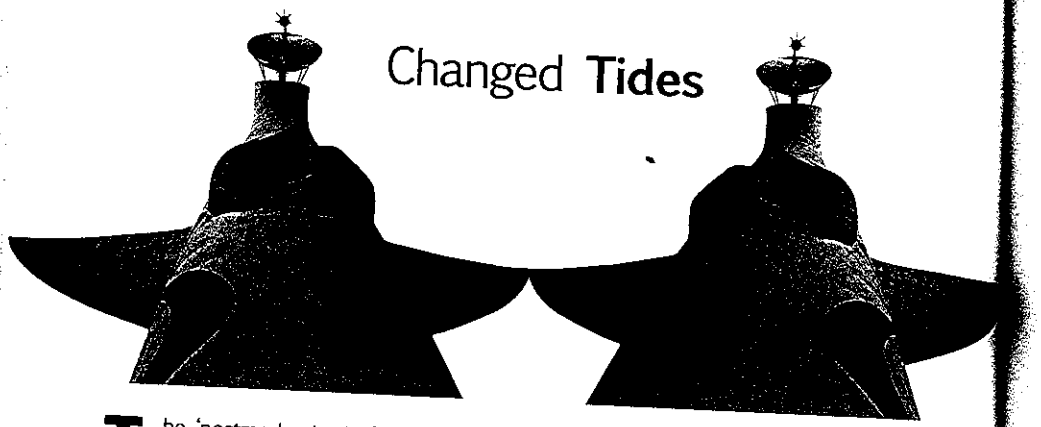
The fact that the Expo site was created from scratch (for a record US$2.3 billion), far outside an existing urban environment, offered Tange an almost entirely untrammeled freedom to explore – and impose – radical ideas of urban organization, in the creation ex nihilo style of Corbusier, a key influence. In this respect, the 1970 Expo was an important milestone in the East Asian uptake of an idealistic architectural ultramodernism that, while already discarded in the disillusioned West as a failed experiment, would dramatically re-shape cities on the western Pacific Rim in the years to come (not least, in Shanghai's Pudong New Area, another 'blank canvas' development). By thus spatially disengaging from the actual process of Japanese urbanism, however, Expo 70 perpetuated the 'derealization' that had accompanied – and propelled – the event's international marginalization. Arising like a dream, uncontaminated by developmental compromise, it further nourished the suspicions of 'postmodern' critics, for whom Expo represented a highly-capitalized utopian distraction from the economic and technological ravages of the modern world.

Within the 330-hectare Expo site a 228-hectare exhibition area hosted 32 Japanese and 84 foreign pavilions, within a complex classification scheme that organized presentations into 99 sections, 56 groups and 320 classes. Kenzo Tange's design made abundant room for symbolism referencing nature and human evolution, most memorably in the Theme Pavilion, the 70-meter-high Tower of the Sun, designed by Japanese artist Taro Okamoto as a three-faced giant. It also placed special emphasis on forums, within which representatives of the participating nations were to discuss topics relevant to a peaceful future for mankind. Cutting across the site, a consistent three-level vertical structure represented human ascent out of a mysterious past, to the present (at ground level), and upwards into a harmonious future shared with fantastic machines. A 120-meter-tall Expo Tower offered panoramic views over the site and the plain of Osaka. Kiyoshi Kawasaki's International Art Museum Pavilion exhibited masterpieces from around the world.

The alliance of advanced electronic technology and environmental planning was evidenced as never before, in computer-controlled traffic systems, solar power applications, and mass transit solutions (including the earliest Maglev technology). Over 100 computers were on display, along with digital telecommunications, laser data transmission, and robots, attesting to the industrial innovations that had rebuilt Japan. Transportation within the site was provided by monorail and air-conditioned moving pathways. Among favored exhibits were a large moon rock on display in the US pavilion, the first-ever IMAX film (a Canadian production shown in the Fuji Group pavilion), and early mobile phones. Expo 70 also took up the time capsule concept from the 1939-40 and 1964 New York Fairs, depositing a capsule donated by the Matsushita Electric Industrial Company to be left for 5,000 years (until AD 6970).

Expo has kept its promise in multifarious ways. In the development of designs it has brought us the space-frame of Kenzo Tange's thematic pavilion and the inflatable roof over the US-Pavilion; in the field of theatrical innovation it has brought us the Canadian pavilion; and within urban design we have been presented with Tange's multi-level grid-work for moving people and conveyor belts. And the world would not have invested money in any of these things in the practical world of building and urban planning – only in the unreal world of a World Exposition are things like this actually built.

– Peter Blake



Changed **Tides**

The 'postmodernization' of the World Expo in the decades following WWII was so thoroughly attuned to the climate of the times that it remained almost invisible as a distinctive phenomenon. By the early 1970s, resource crisis and emerging stagflation was deepening the economic pessimism of populations already numbed by the chronic menace of thermonuclear warfare, seemingly intractable social problems, and increasingly apocalyptic environmental scenarios. Even in the United States, where modernist optimism had survived into the 1960s, demoralization took hold as its society was torn apart by violent struggles over civil rights, escalating warfare in South East Asia, Oil Shock, and economic dysfunction. Among the rich nations of the 'First World', only Japan was demonstrating obvious forward momentum, reflected in its enormously popular 1970 World Expo, in Osaka (see pp.124-5).

Beyond the rich world, the promise of modernity seemed even less credible. The 'Second World' countries dominated by the USSR were sliding into terminal crisis, as their command-control economic policies became increasingly ineffective. India's Fabian-style socialism was delivering a 'Hindu rate of growth' entirely insufficient to develop the country, or even meet the basic needs of its rising population. Much of Africa and Latin America was socially and economically regressing. In China, 'Cultural Revolution', based on principles of incessant class struggle, had paralyzed government functions and destroyed the education system, without contributing positive solutions to practical development problems. Once again, it was in East Asia that the most obvious sparks of residual optimism vitality were to be found, as South Korea and the emerging 'Tiger' economies forged a new economic synthesis, flexibly adapted to local conditions, yet solidly based on the modernist template of trade-orientation and high technology.

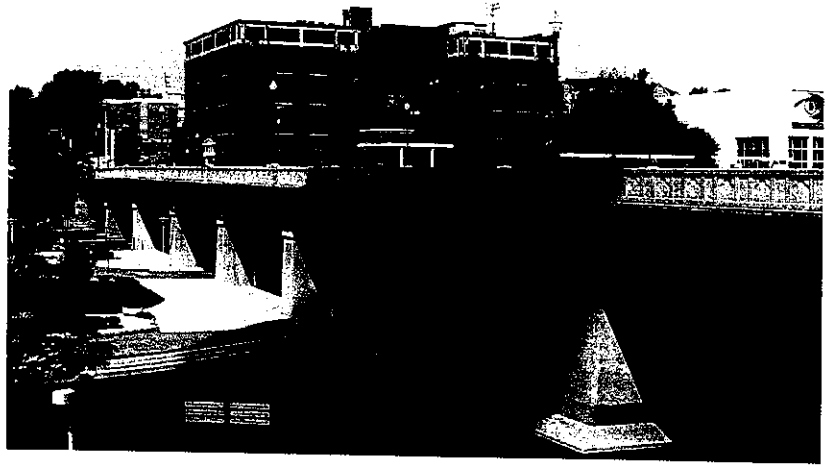
Nothing less than a global renaissance would have sufficed to pull the world out of its slow death spiral. As the 1970s crossed into the 1980s, against all reasonable expectation, a global renaissance is exactly what occurred. The pro-market lessons of tigerish East Asia found keen students in the English-speaking world, and, even more remarkably, in neighboring mainland China. In December 1979, the PRC's second generation leadership, under Deng Xiaoping, introduced a radical reform program that liberated the economic potential of the country for the first time in its history. The rapid modernization that had eluded China for over a century ignited almost immediately. Just ten years later, the Soviet-led Second World abolished itself. By the early '90s India had followed China's lead, dramatically decontrolling its economy, with predictably exuberant results. Within a span of less than 15 years, the free global economy that colonial modernity had spoken so much about, sought haphazardly to impose, and finally been broken upon, had given birth to itself. A planetary digital communications infrastructure fell into place, deposited by waves of electronics revolution that retooled industrialism for the 32-bit microprocessor, desktop and personal computer, compact disc, Internet, fiberoptics, satellite and mobile telephony, and digital video systems. 'Globalization' ceased to mean the aspiration to an integrated global economy, and started to mean the unfolding effects of one. Modernity 2.0 had arrived.

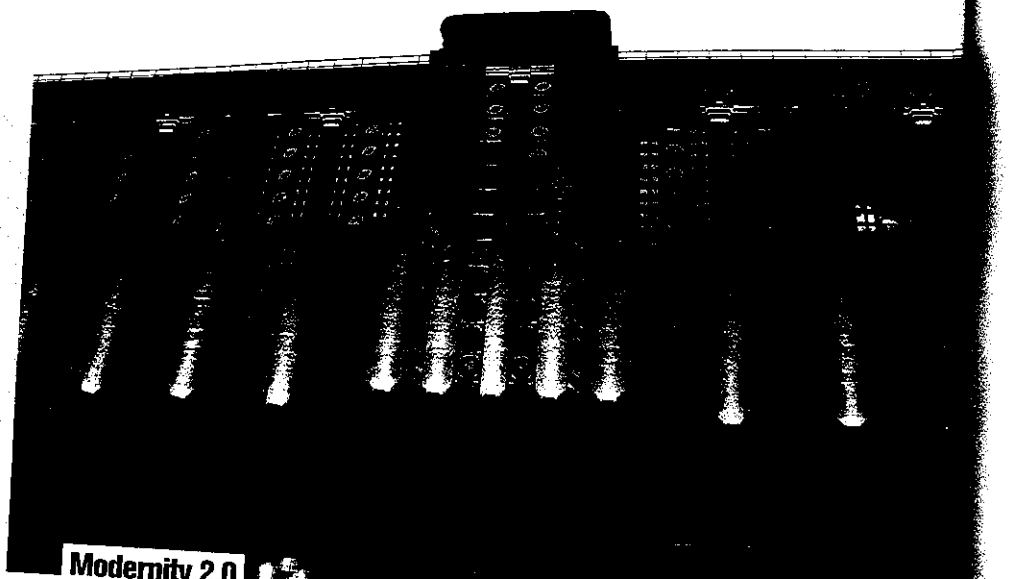
The first Expo of the new era was the 1982 World's Fair, held in Knoxville, Tennessee, in the United States, from May 1 to October 31. Themed 'Energy Turns the World', the event was relatively small, receiving something over 11 million visitors. It took place on a 28-hectare site between downtown Knoxville and the University of Tennessee, previously occupied by a deteriorating railroad yard. President Ronald Reagan ceremonially opened it.

The architectural centerpiece at Knoxville '82 was the Sunsphere, an 81-meter steel tower supporting a five-story golden globe containing observation decks and a revolving restaurant. Still standing today, Sunsphere has been embraced as a Knoxville icon.

Popular exhibits included a Peruvian mummy, ancient Egyptian artifacts, a giant Hungarian Rubik's Cube, and the Sunburst sculpture in front of the (10-nation) European Community pavilion. The six-story US pavilion was topped with a 465-square-meter solar-paneled roof, generating electricity to run the building's ventilation system. Among the innovations on show were early touch screen displays, boxed milk, and Coca-Cola's Cherry Coke.

It was at Knoxville '82 that China returned to the World Expo, for the first time since the Second World War. The Chinese pavilion, with its ornate 17-meter pagoda, was hugely popular, and long queues resulted in visitors waiting over four hours to enter. Eventually, special reservation tickets were introduced to improve crowd management – a stress-induced Expo innovation that would be repeated at future fairs. ✖





Modernity 2.0

At the level of cultural – and especially theoretical – articulation, the new global modernity that slotted together from roughly the beginning of the 1980s remains a diffuse and impressionistic object. Yet its historical objectivity is attested by the very diversity of perspectives that register it. These range from neomarxist sociologists such Ulrich Beck, for whom it appears as a reflexive 'second modernity' (grappling with its own endogeneous risks), to neoliberals including Carlos Escudé and Agnes Heller who defend the restoration of core modernist themes (such as scientific rigor and historical progress). Among architectural therorists and practitioners, an equally diffuse sense of 'neomodernism' encompasses a variety of responses to the perceived sterility of postmodernism, and the return of an enhanced modernist vision, encompassing such pioneers as Zaha Hadid (and perhaps even the majority of important contemporary architects).

What can be said simply and succinctly, is that the neomodern distinguishes between the passing of an original modernity, and the death of modernity as such. When the world historical formation that had been identified with modernity ever since it began in north western Europe, roughly two centuries ago, entered into pronounced decline quite early in the 20th century, the result was a chronic sense of civilizational crisis that extended naturally into hyperbolic proclamations about the end of progress, history, or even reality. Given the dominant religious culture of modernity's historical heartlands, these increasingly popular declinist ideas easily absorbed apocalyptic imagery and cosmic delusions of grandeur. Modernity, it was held, was a 'Western construct' – and perhaps even an illusion. It was destined to disappear along with the West, shaking the very nature of being to its foundations, among social upheavels of eschatalogical drama. At the very least, it would continue as a hollow, hallucinatory comedy, without direction or truth.

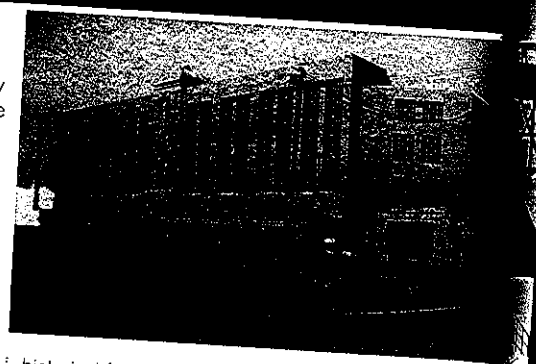
The robust re-invention of modernity in a post-colonial world has discredited such ideas. Overall global economic and technological advance, urbanization, scientific understanding, and incremental political reform, have not only suvived, but hugely broadened and accelerated. Modernization remains the key to the direction of history.

Yet the return of modernity is more than a simple repetition, since the neomodern inherits modernity as an object, and a foundation. Most obviously and importantly, the integrated global economy and communications system, which was an ultimate implication of Modernity 1.0, is presupposed by Modernity 2.0. Technological and economic globalization is no longer just a tende a goal, but an operative social and hi reality.

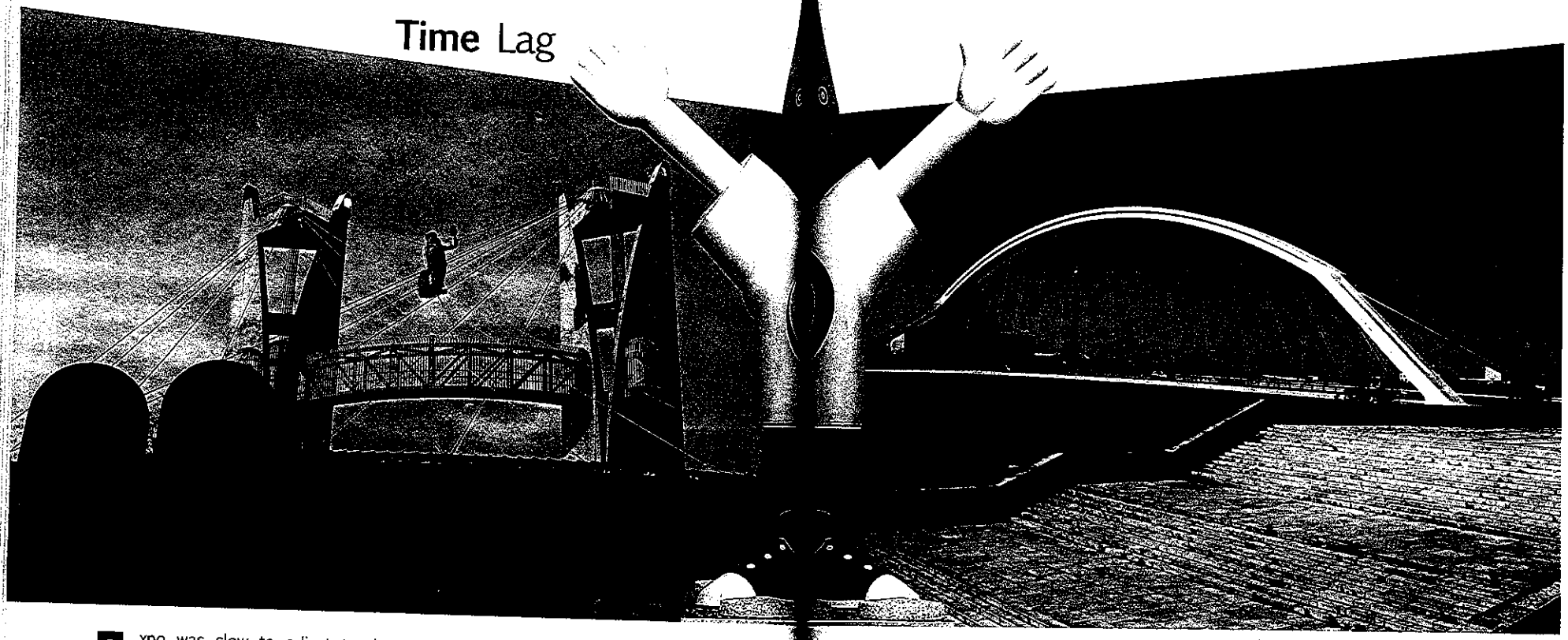
Nowhere on earth is this new realit incarnated more obviously than in Sh a city that has adopted global moder into its metropolitan identity. Shangha also been an interrupted city, whose and architectural heritage is describe two great, and clearly differentiated, v of modernization. Even more remark- ably, the city's contemporary architect has embraced these characteristics, v astounding lucidity, and innovated a d neomodern style of urban constructio

All across Shanghai, the physical leg of the city's original modernism is beir sorbed into new creations. Residential industrial structures from the late 19th early 20th centuries are encapsulated glistening shells of glass and metal, in by museum display design. No longer and replacing its palaeo-modernist her or even merely restoring it, the city is e oping it within a stylish architectural ca that emphasizes transparency, delicacy and luminescence, deliberately juxtapo against the imposing weight and densit urban memory. The raw brickwork, rust girders, and heavy masonry of inheritec structures are left exposed, and conspi ously exhibited, as hybrid elements with neomodern buildings whose lightness, subtlety, and intelligence expresses the industrialism of the information age.

Such designs, characteristic of Shang hai's renovated lifestyle hubs and creat clusters, express a philosophy, and ever ethics of history. The city's old modernit neither obliterated nor blindly reverence but addressed intelligently and confider as the physical memorial or larval remn of a treasured modernizing impulse. In a cityscape governed by growth, the mon mental heritage of an earlier modernity longer dominates, but spaces are metic lously made for this time-worn stone an iron, as if for invaluable pieces of an ope ended jigsaw puzzle depicting the false alternation (or true identity) of continuity change.



Time Lag



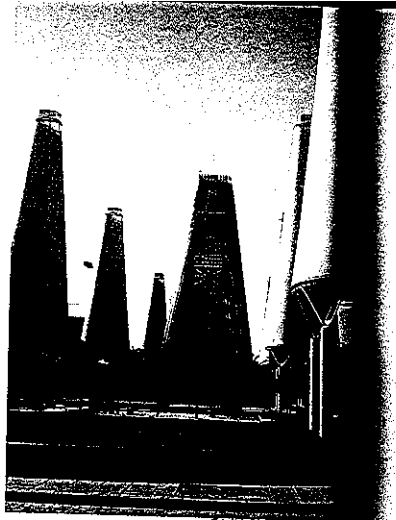
Expo was slow to adjust to the re-made world. Specialized events, in the Knoxville mould, addressed a variety of themes including homes (Tsukuba, Japan 1985), transport and communcations (Vancouver, Canada 1986), and leisure (Brisbane, Australia 1988), drawing audiences in the 18-22 million range. It was not until 1992, in Seville, Spain, that a Universal, or BIE category 'A' exposition was held, fully 22 years after the Osaka World Expo of 1970, and an astonishing third of a century since the last European Expo of any size (but in fact also a Universal Exposition, that of Brussels 1958).

Themed 'The Era of Discovery', the World Expo of 1992 celebrated the 500th anniversary of Columbus' arrival in the New World. It attracted almost 42 million visitors to its 215-hectare site on the island of Cartuja. The site was memorable for its architectural extravagance, including impressive bridges and gates as well as pavilions. Among the highlight national pavilions were those of Japan (the largest wooden structure in the world), Morocco (a reconstructed palace), and host country Spain (an avant garde geometric edifice). China's pavilion was traditionally themed, introduced by a large ornamental gate, and containing a giant tapestry of the Great Wall, although a wrap-around screen displaying scenes of the country added a technological flourish. Throughout the event, new visual media were highly prominent, with a variety of innovative formats, spectacular screens, and visual arts productions on display.

The most significant innovation at Expo '92 was geographical. For the first time, and in keeping with the theme of the event, every South American nation was represented, with participation by poorer countries supported by a Plaza de Americas. (A Plaza de Africa similarly assisted struggling countries in that continent.)

Despite its status as a Universal event, Expo '92 was notable for its continuity with, and even exaggeration of, the trend towards abandonment of original Expo topics. Among its five theme pavilions, three served to sub-divide the main theme ('Navigation', 'Discovery', and 'The Fifteenth Century') while the remaining two, quite arbitrarily, conformed to the green drift of late-20th century expositions ('Nature' and 'Environment'). In this captivating and paradoxical place and moment, modernity was seized as an object, with unprecedented historical comprehensiveness, and yet, at the same time, uniquely disengaged. Never before had the technological and economic staples of the World Expo tradition been so thoroughly marginalized. Wherever the future was being made in 1992, it was not in Seville.

As if to compensate for singular non-universality of the previous year's Universal Expo, the much smaller, specialized international exposition held in Daejon (then Taejon), South Korea, in 1993, sought to introduce the driving forces of the emerging world. This three-month event, themed 'The Challenge of a New Road of Development', lasted from August 7 to November 7, and celebrated the centenary of the first Korean participation in World Expo (at Chicago, 1893). Large Korean



corporations, including Daewoo, Lucky Goldstar, Samsung, and Ssangyong, presented spectacular exhibits foregrounding the country's model of high-speed, high-technology economic growth. Despite the modest scale and status of the event, its path-breaking theme and identity as the first Expo in a developing country attracted extraordinary interest, which was demonstrated by the participation of no less than 108 nations.

In the final years of the millennium, the Expo returned to Europe. Firstly, for a specialized event in Lisbon (1998) themed 'The Oceans: A Heritage for the Future', which echoed the twin New World exploration and environmental awareness topics of Seville '92. Running from May 22 to September 30, the Lisbon Expo received 11 million visitors. Its main attraction was the Oceania Virtual Reality Pavilion, which propelled visitors through a multimedia oceanic history of the earth.

The turn-of-the-century World Expo, held in Hanover, Germany, from June 1 to October 1, 2000, was themed 'Humankind, Nature, Technology'. Forty million visitors were anticipated, but only 25 million in fact attended, resulting in a US$600 million deficit. The contrast with the Paris World Expo of 1900, attended by twice as many people, offered as a sad illustration of long-standing problems. The publicity campaign for the 2000 event had minimal international reach, it was criticized for being 'over-cerebral' (code for excessively 'postmodernized'), and ticket prices were set at a level (DM 69) that made them vulnerable to competition from commercial theme parks. According to local environmentalist Ralf Strobach, "For a long time, companies were unsure if they would be putting money in an eco-show or a showcase for their latest inventions."

Contemporary Germany has been the economic power-house of Europe, and a great beneficiary and contributor to the globalized world of recent decades (competing with China for the status of the world's top exporter). It is also a valued World Expo participant, with a beautifully designed pavilion and exhibition in 2010, for instance, that has been among the most keenly anticipated. Yet in the role of World Expo host, the German-speaking world seems strangely cursed. Both of its World Expos, in Vienna 1873 and Hanover 2000, have been planned and resourced on an enormous scale, only to be afflicted by attendence shortfalls, brutal financial losses, and comparative historical ignominy, or at least grave disappointment.

The last Universal Exposition to be held before 2010 was also consistent with a trend of decline. Japan's second category 'A' World Expo, following the hugely successful 1970 event in Osaka, was held from March 25 to September 25, 2005, in Aichi Prefecture, near the city of Nagoya. Only slightly more than 22 million visitors attended the event, scarcely a third of the number drawn to Osaka 35 years before.

As at Osaka, Japanese excellence in high-technology was on widespread display, especially in robotics. Anthropomorphic machines, with humanlike motility, and even musical skills, were stars of the event. Android Aichi included the first public introduction of Toyota Partner Robots, humanoid automotons developed as companions for lonely seniors in a country suffering from the social effects of a greying population.

The Aichi theme, 'Nature's Wisdom', heralded the most environmentally-focused large

Expo to date, and its declaration of principles reinforced the message with a frontal challenge to the existing direction of global modernization: "We must come together and share our experience and wisdom, in order to create a new direction for humanity which is both sustainable and harmonious with nature." Green practices, including applications of recycling, energy-saving, alternative power, and low-emission on-site transportation, set new standards of environmental conscientiousness.

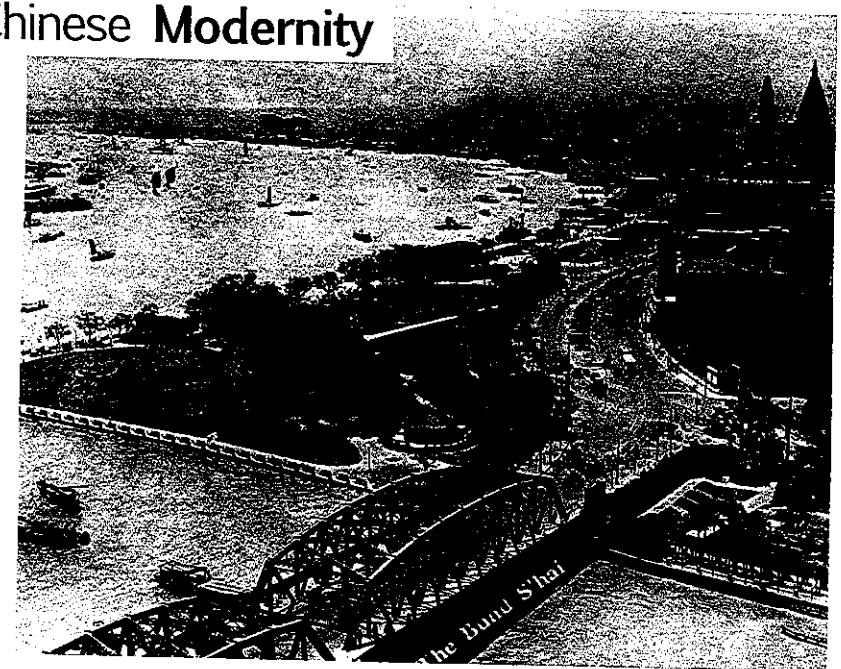
The Japan of 2005 was a very different country to that of 1970. For over a decade, it had been held in the vice-like grip of economic stagnation, accentuated by collapsing fertility, impending demographic shrinkage, and rapid aging. The confidence of the boom years had drained away, leaving a society that was affluent but developmentally static and disillusioned, as well as increasingly neglected by international media and popular attention, which had shifted their focus of fascination towards the country's turbo-charged neighbors in the East Asian region. Modernization had gradually ceased to be a source of excitement and inspiration for the country, as optimism choked on seemingly irresolvable problems, chronic failures, and political frustrations. Rich and technologically advanced, yet shrunken, cynical and miserable, Japan had become almost European in its ambivalence towards the course of the world, and its Expo of 2005 reflected that fact.

As a final footnote to the epoch of postmodern Expos, a specialized expostion was held over the three months July 14 to September 14, 2008, in Zaragoza, Spain. It was devoted to what had become an almost obsessional Iberian Expo topic, and was themed 'Water and the Sustainable Development'. The main thematic pavilion exhibited the largest freshwater aquarium in Europe. Architectural highlights included Enrique de Teresa's 76-meter-tall Water Tower, and Zaha Hadid's two-story Bridge Pavilion.

By the early years of the new millennium, World Expo had reached an obvious watershed. An event that had originally been synonymous with the promotion of rapid development had never been staged in a developing country, or at least, never since the rich world itself had deserved this status. Development, which to the leading powers of the industrial revolution had seemed to be an interminable process of vigorous economic expansion and technological advance, had gradually shifted in meaning. It had come to suggest a process with definite destination, and a previously unimaginable 'developed' status was applied without serious reflection to the world's richest economies, among which Expo hospitality was exclusively concentrated. When stripped of the impetus to continual – even urgent – development, however, the World Expo was divorced from its traditional purpose. An inevitable loss of direction resulted, along with a growing alienation from the technological and economic bases of historical momentum that had supported the Expo during its most glorious episodes, and to which it had, in turn, so enthusiastically and abundantly contributed.

A series of questions were thus posed, if only implicitly: Had the World Expo been separated entirely and irrecoverably from its historical roots? Did it now exist as a quite different type of event, designed to critically interrogate the process of global modernization, rather than to celebrate and further it? Was development now to be considered a neutral fact of the world, to be discussed from a distance, and even with suspicion, by a World Expo institution that no longer identified itself with the axiomatic urge to grow? Had Expo somehow acquired the duty, certainly absent in its first century, to 'correct' the course of the world? ✖

Chinese **Modernity**



The tale of Chinese modernization belongs among the great epics of world history: monumental in scope, full of twists, reversals and disappointments, saturated in drama and tragedy, yet guided surreptitiously towards astonishing successes. The essentials of this story can be identified in China's long and complicated relationship with the World Expo which, as elsewhere, mirrored a wider relationship to modernity, although seen through Eastern eyes.

For the preponderant part of modern history, the Chinese experience has been a photographic negative of the European, and later the broader Western one. What had been the world's most powerful, prosperous and technologically advanced society for millennia was reefed on modernity as if on cruel rocks, entering into relative and then absolute decline that submerged it into a 'century of humiliation', beginning in almost exact coincidence with the World Expo.

Rendered complacent by countless centuries of civilizational supremacy, China was slow to recognize modernity when it first knocked politely on the door, in the great port of Canton (today's Guangzhou), in the country's marginalized far south.

Balanced Prospects

The Universal Expo held in Aichi Prefecture, Japan, in 2005, was the last to be held before Shanghai took the stage in 2010. For China, this was an invaluable opportunity to deepen its Expo experience, and to refine its thematic ideas for the 2010 event.

The subtlety with which the Chinese exhibition at Aichi accomodated itself to the 2005 Expo theme of 'Nature's Wisdom', while simultaneously opening new avenues for development, makes a fascinating case history in participation, and preparation. China's Aichi theme 'Nature, City, Harmony – Art of Life' struck a delicate balance between a variety of implicit and explicit objectives. Most obviously, it extended the courtesy of conformity to the Aichi Expo theme, by echoing it, and even recalling that of Japan's previous World Expo, in Osaka 1970 ('Progress and Harmony for Mankind'). A specifically East Asian emphasis in Expo thematics was thus consolidated, consistent with a Confucian cultural matrix in which values of harmony and balance provide essential guidance.

China's 2005 theme also drew particular attention to the city, prefiguring the theme of its own 2010 Expo ('Better City, Better Life'). Balancing the polarities of nature and the city, wilderness and artifice, rural and urban life, it defined a test-case for harmony as a practical value, and suggested a domain of experimental applications with clear relevance to the Expos of 2005 and 2010. Such practical application was even named precisely, as the 'Art of Life', which itself combines artifice and nature (perhaps doubly so), and thus provides an abstract prototype for any emerging 'green technology'. The city is itself a piece of nature, as well as a phenomenon in polar tension with nature, and a green sensibility does not imply (or excuse) indifference to the problems and opportunities of urban development.

China's five exhibition areas sought to exemplify this balanced approach in respect to culture and nature, heritage and progress. A 'Tree of Life' demonstrated the technological enhancement of natural experience, video documentaries offered a panoramic overview of Chinese civilization, with a focus on urban development, an 'Art of Life' exhibition arrayed ancient artifacts alongside modern high-tech products, and a futuristic 'Crystal Cinema' was counter-balanced by sandalwood furniture of Qing Dynasty design. Historical acceptance was portrayed as the harmonious complement to advances in technical capability, rather than a disharmoniously contrasted alternative.

The Aichi exhibit offers a foretaste of the way China's historical lessons contribute to the World Expo as an institution. In particular, the widespread assumption that development is intrinsically disruptive of balance and harmony – an attitude that the Expo has seemed disturbingly vulnerable to – is deeply inconsistent with China's experience over 25 years of Reform and Opening, which have been, simultaneously, an unprecendented moment of rapid modernization and an immense (if incomplete) restoration of balance. For a country long torn between the diverging forces of rigid conservatism and iconoclastic modernism – exemplified by the extremes of the Boxer Rebellion (1898-1901) and the 'Cultural Revolution' (1966-76) – this profound reconciliation, between the ancient traditions of Chinese civilization and the innovations of the modern world, remains an unfamiliar treasure. World Expo provides China with an opportunity to share it.

B

In 1839-42, Britain kicked down the door, fighting the First Opium War in defense of its trafficking interests, and sealing its victory with the first and greatest 'unequal treaty' (of Nanjing, 1842), that opened the country to commercial access and established extraterritorial rights in new 'treaty ports' (including Shanghai). Britain's ascent not only tracked China's descent, but it certain respects accelerated and harshened it. As Britain cracked the China market, China cracked apart.

For China, the great tide of modernizing globalization struck as a calamity, its lineaments inextricable from the cynical attempt to blast and drug an ancient civilization into an alien social order. It was understandable, therefore, that for many Chinese of all social stations, the coming world appeared far more threatening than inviting. Nevertheless, and perhaps astoundingly, there were others who, from the very beginning, seized the new opportunities that arose.

The first World Expo, London's Great Exhibition of 1851, took place less than a decade after the signing of the Treaty of Nanjing. Among the exhibits were silk goods brought from Shanghai, by a merchant named Xu Deqiong (alterntively Xu Rongcun). Xu was personally greeted by Queen Victoria at the event, and his Yung Kee Huzhou Silk won both gold and silver prizes. This entrepreneurial triumph was only the first example of Chinese Expo involvement, initially private and informal, during the classical era of the World Expo (see pp.140-1).

For China as a whole, however, modernity remained primarily an external threat, and modernization an obtainable goal. Foreign depredations were compounded by ruinous civil war (the Taiping Rebellion, 1851-64), ineffective and dispositionally deeply conservative Qing Dynasty governance, and, perhaps above all, the vast civilizational inertia that resulted from the country's sheer geographical and demographic scale, hardened over millennia of continuous cultural and political tradition. Talented reformers were consistently frustrated, and even murdered, whilst an unrelenting string of military catastrophes deepened popular and official embitterment, seducing many to the toxic solace of atavism and xenophobia. By the time an official Chinese delegation first attended World Expo, at St Louis, USA, in 1904, Imperial China was entering its twilight.

The repeated frustration of modernization efforts under the Qing nourished political radicalization. Reformers became revolutionaries, and in 1911, under the leadership of Sun Yat-sen (Zhongshan), a republican uprising overthrew the Qing Dynasty, ending China's imperial system. Hopes that the country had definitively escaped from its pre-modern cage were quickly dashed, however, as national disunity, ambitious warlords, and corruption strangled the aspirations of the new regime, whose torments were further amplified by an intensification of foreign aggression, culminating in the Japanese invasion of 1937-45.

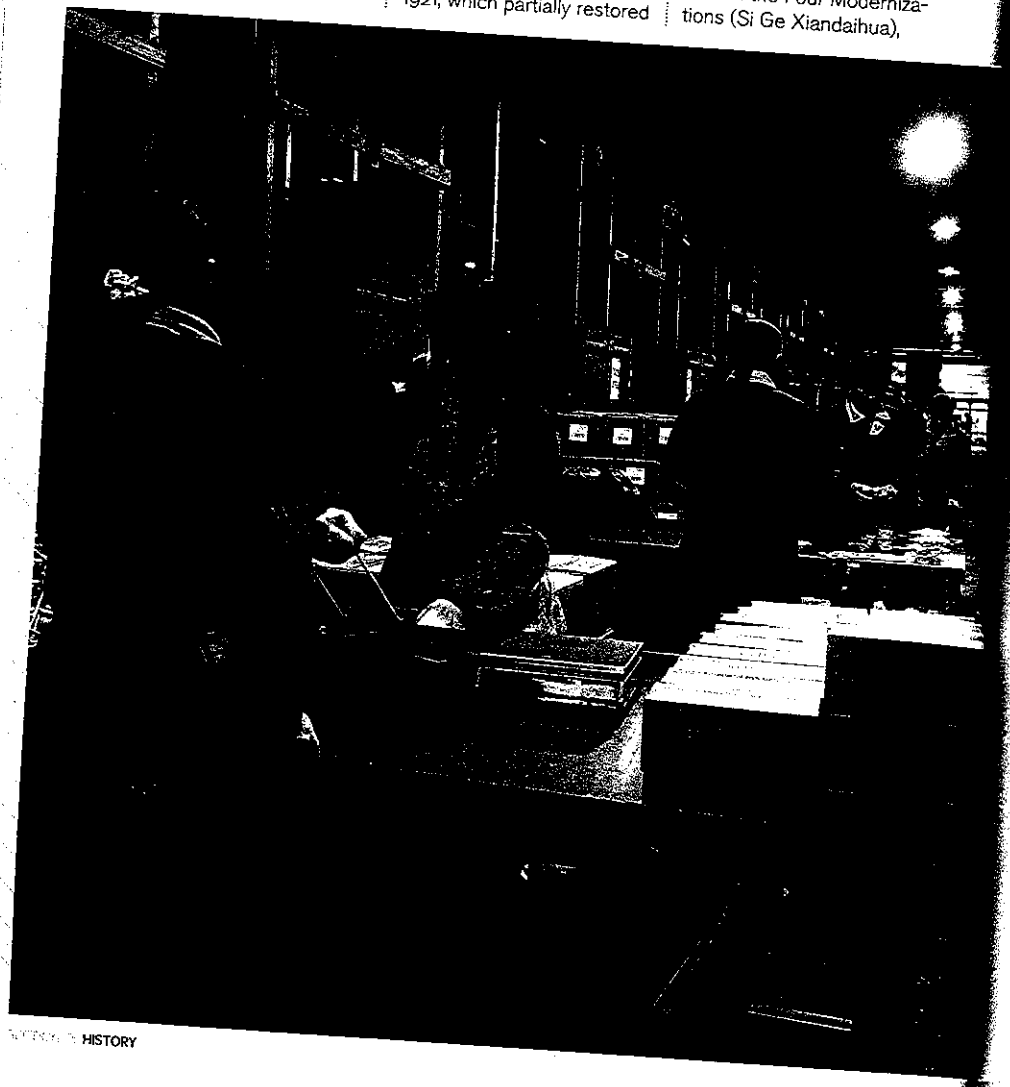
World war was followed by civil war, and the birth of a New China (on October 1, 1949). Communist government restored the country's territorial integrity and national self-confidence, while advancing social modernization, especially in regards to the status of women. Yet an impatient, utopian ultramodernism, based on entirely unrealizable goals, demonstrated its catastrophic impracticality during the Great Leap Forward (1958-61). When the country's wisest leaders, most prominently Deng Xiaoping and Liu Shaoqi, began restoring the country to realistic modernizing course, the ground was laid for an era of Reform and Opening (Gaige Kaifeng), which began in December 1978. Drawing upon the successful examples of Chinese modernism or 'sino-futurism' realized in the ethnic Chinese 'little dragon' economies studding the mainland's southern and eastern periphery, as well as diverse grassroots economic initiatives within the mainland itself, Deng's new policy framework radically liberated China's productive forces, revitalized science and technology, opened the country to foreign talent, investment, and ideas, and encouraged bold experimentation at all levels of society. These policies finally cleared the way for a realization of the Four Modernizations, stressing realism and practicality as guiding principles, which had been advanced by Zhou Enlai as early as 1963 (see pp.138-9).

The era of Reform and Opening saw a simultaneous restoration of hopes and memories. Surging economic growth and technological capability was accompanied by a recovery of national heritage and a cultural revival, following a pattern already seen in the confidently Confucian 'little dragon' economies. When Chinese World Expo participation was restored in 1982, in Knoxville, USA (see p.127), its national pavilion strongly emphasized the country's cultural traditions. Chinese modernization had finally overcome its obstructive torments, in a productive re-animation of its past (see p.135). ■

Four-Wheel Drive

Marxist Communism was born as a modernist philosophy and political program, so it is not surprising that the goal of modernization found solid foundations within this movement. However, this goal was often, and even typically, frustrated by a tendency to hyperbolic overreach that was equally deeply rooted in Marxist thought, expressed as a systematic substitution of utopian objectives for practically realizable objectives. Explicit correctives to this trait became a staple feature of Marxist governance, beginning with Lenin's New Economic Policy of 1921, which partially restored economic signals, economic incentives, and private market activity within the badly flailing Soviet economy, just four years after the revolution of 1917.

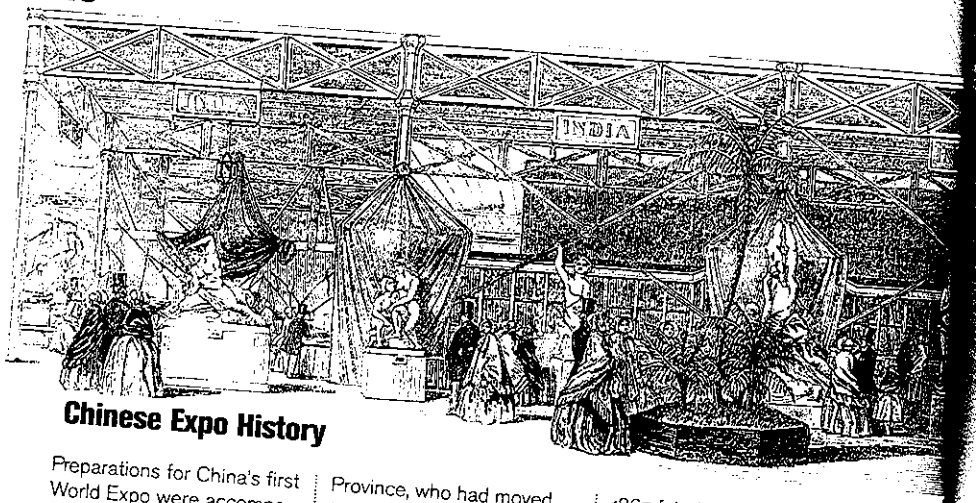
Within the history of the People's Republic of China, the call for corrective practicality is associated above all with the Four Modernizations (Si Ge Xiandaihua), first articulated by Zhou Enlai in January 1963, in Shanghai, at the Conference on Scientific and Technological Work. The following month, Nie Rongzhen spelt out the concept more precisely, while enumerating the four fields in which modernization was proposed: agriculture, industry, defense, and science and technology. Modernization was to be advanced through improvements to management systems, accounting, work incentives, technical training, and supervision.



These sober proposals, following immediately upon the utopian calamity of the Great Leap Forward (1958-61), triggered a disastrous backlash. The rejection of the modernizing agenda in the 'Cultural Revolution' (1966-76) carried extravagant utopianism to previously unimagined extremes that included personality cultism and a dismissal of the very principles of management, government, and education, along with the denunciation and humiliation of technical experts, and the wholesale negation of Chinese traditions. Yet ironically, and at enormous cost, the excesses of the 'Cultural Revolution' provided an important service, by clearly crystallizing the consequences of abandoning realism to political delirium, and thus delivering a harsh but effective practical education (even as the country's actual education system was being vandalized). Mortified by the pointless chaos of the previous decade, Zhou Enlai repeated his call for the Four Modernizations at the Fourth National People's Congress, in 1975, shortly before his death. The vast crowds attending his funeral indicated that his message had at last been heard.

It was not until December 1978, at the Third Plenum of the 11th Central Committee, that the program was formally introduced, by Deng Xiaoping, who adopted the Four Modernizations as an essential guideline for the second-generation CCP leadership, initiating the era of Reform and Opening. Businesses were freed to organize themselves efficiently, economic initiative was encouraged, and technical experts were rehabilitated. Doors were opened to international trade, enabling capital goods to be introduced from overseas to upgrade local industries, and new export-oriented enterprises to flourish. Chinese growth exploded, and the country became a global standard-bearer for the benefits of market-oriented reform.

The Four Modernizations had been designed to transform China into a major economic power by the early 21st century, and to build robust self-reliance through openness, rather than isolation. In both of these respects, the success of the policy has been indisputable. As Deng Xiaoping remarked: "Development is the ultimate argument."



Chinese Expo History

Preparations for China's first World Expo were accompanied by a surge of popular, media, and scholarly interest in the event. As a result, a long-neglected dimension of Chinese and Expo history came under increasing scrutiny, as a string of discoveries uncovered a far deeper legacy of participation than anybody had anticipated. By November 2009, physical substantiation of this legacy had a level sufficient to support an auction, in Beijing, entirely devoted to the topic. Among 100 Expo-related artifacts, were precious documents, paintings, engravings, medals, photographs and commemorative plates, some more than 150 years old.

The single most remarkable item, however, was a wooden engraving that portrayed Queen Victoria greeting a Chinese exhibitor at the very first World Expo, London's Great Exhibition of 1851. This merchant, named Xu Rongcun (also known as Xu Ruiyan, and Xu Deqiong), was a comprador, born in Xiangshan, in Guangdong Province, who had moved to the rapidly emerging business center of Shanghai in the years immediately following the Treaty of Nanjing (1842). He worked both for Britain's Dent Company and on his own account, specializing in the high-quality silk and tea trade. Upon learning about the Exhibition, he shipped 12 boxes of his premium Yung Kee Huzhou Silk to London, where the quality of his merchandise was happily recognized, earning gold and silver awards. Xu's story was uncovered and publicized by diligent fourth-generation descendant, Shanghai native, and retired scholar Xu Xizeng, assisted by his son, and the Shanghai Library archives. The ancient entrepreneur became a national hero, who was given the affectionate title 'Huzhou Silk Boy'.

After 1851, Chinese participation is recorded at 27 additional World Expositions. A China Pavilion was created for the London Expo of 1862, and the Paris Expo of 1867 included a Chinese tea ceremony. It was the 1867 fair that introduced the Expo to Chinese literature, when a writer and modernist intellectual called Wang Tao, a from Wu County, in Jiangsu Province, wrote a work called Travel Sketch – The Chapter of the World Expo, to document what he had witnessed at the event.

Recognition of Expo by the Qing imperial government dates back to the Vienna Expo of 1873, which included an official Chinese delegation. But the first World Expo to include organized Chinese national participation was the 1876 World Expo in Philadelphia, where Li Gui represented the country's industry and commerce. Li also wrote a book documenting the event, entitled New Records of World Tour.

The Chinese government declined participation in the World's Columbian Exposition, in Chicago 1893, to protest against the Geary Act (passed in 1892) which discriminated against Chinese immigrants and laborers resident in the United States. In the St Louis Expo of 1904, however, official Chinese participation reached a new strage, when the Qing imperial family was personally represented by Prince Pu Lun, hosting a grand reception for over 3,000 guests. A Chinese Venue and Chinese Village were constructed for the event, and international media reported it as a threshold moment for Chinese participation in World Expo. Among the most fascinating threads to this story is that of Liang Qichao, another modernist writer, who had written a story in 1902 that prophetically imagined a Chinese Expo, held in Shanghai, 50 years in the future. Liang's vision is no less impressive for being half a century premature.

In 1910, the Qing imperial government tested the country's capabilities as an Expo host at the Nanyang Commodity Exhibition, in Nanjing. The event was supported by local businesses, and included theaters, music venues, shops, restaurants, and extensive usage of electric lighting. Japan, the United States, England, and Germany, were among the foreign nations participating, along with a number of Southeast Asian countries, and almost all of China's provinces. Over a million exhibits were displayed on a 60-hectare site.

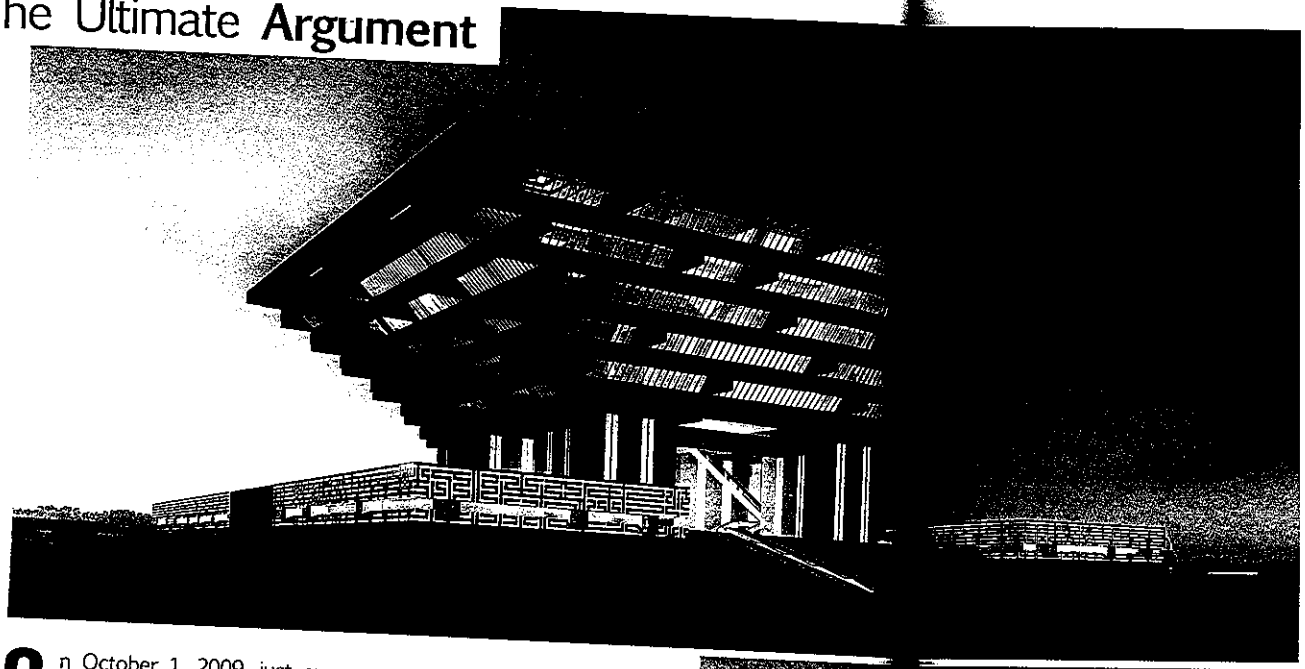
China's republican revolution of 1911 was succeeded by territorial fragmentation, warlordism, and intensified foreign aggression, but it also unleashed pent-up modernizing impulses that resulted in an efflorescence of Chinese Expo participation. Despite its domestic challenges, the country was present at every subsequent World Expo until the New York Fair of 1939, making impressive contributions to the atmosphere and development of the event. After 1939, war, revolution, and autarkic economic policies kept China out of the World Expo circuit until the beginning of the era of Reform and Opening, and the first participation by the People's Republic of China, at Knoxville, USA, in 1982.

The entire Chinese nation rejoiced over the downfall of the Gang of Four. Things are better now and the mood of the people has improved. We are soberly aware that it is an arduous task to achieve the four modernizations, but we can manage. First of all, the entire Party is united, as are the people of the whole nation. Our people are hard-working and have a tradition of hard struggle. Second, we have laid a solid material foundation. Third, we have clearly defined principles whereby we shall make use of all the advanced technologies and achievements from around the world. The Gang of Four did not allow us to do so, calling this a slavish comprador philosophy. Science and technology have no class nature; capitalists make them serve capitalism, and socialist countries make them serve socialism. Ancient China had four great inventions, which later found their way to countries around the world. Why then should we be hesitant about making use of advanced technologies and achievements from around the world? We should make advanced technologies and achievements the starting point for our development. Finally, we have abundant natural resources. To sum up, the tremendous enthusiasm of our people, a substantial material foundation and our enormous resources, in addition to the introduction of state-of-the-art technology from around the world will make it possible for us to achieve the four modernizations. Naturally, the task will be far from easy. The world's advanced technologies continue to develop rapidly, with the rate of development no longer calculated in terms of years, but in terms of months, and even in terms of days, a trend which we call 'changes coming with each passing day'. Even when we have realized the four modernizations, our output of industrial and agricultural products and our national income will remain relatively low when calculated on a per capita basis. Our current principles and policies are clearly defined, and our motto is 'less talk, more action'.

– Deng Xiaoping (1978)

from the Selected Works of Deng Xiaoping: Volume II (1975-1982)

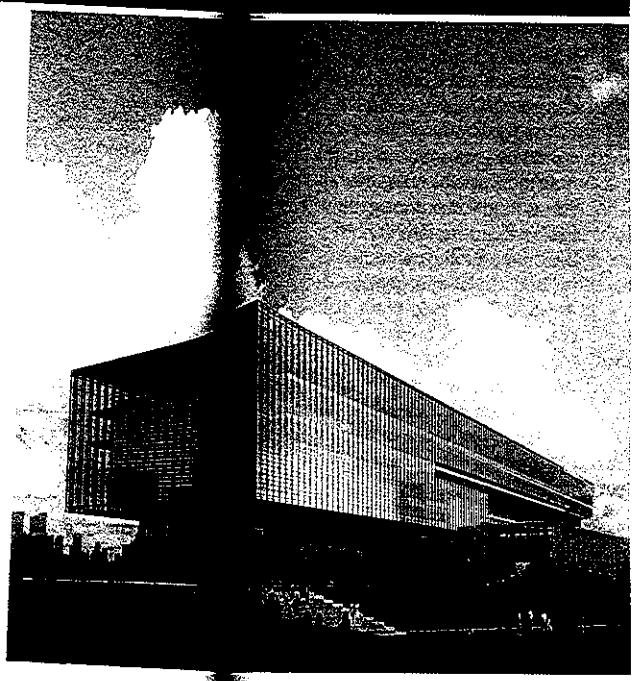
The Ultimate **Argument**



On October 1, 2009, just over a year after China's great coming out party had been staged in Beijing, at the 2008 Summer Olympic Games, another vast pageant took place in the city. Special National Day celebrations, centered upon a meticulously orchestrated and televised parade in the capital, marked the 60th anniversary of the foundation of the People's Republic of China. They also commemorated the 30th anniversary of Reform and Opening in the country, and the inauguration of the fastest and most broadly-based development episode in the history of the world.

Less than seven years before, on December 3, 2002, China's bid to host the 2010 Expo in Shanghai had climaxed at the 132nd general assembly of the Bureau of International Exhibition's, held in Monte Carlo, Monaco, where it was selected for the honor in the fourth round of voting by a two-thirds majority of BIE member countries (see p.144). At the opening ceremony of the 7th World Expo 2010 Shanghai China Forum, held in Beijing in November 2009, Premier Wen Jiabao reflected on this moment, and the country's long and difficult road to Expo-host status, noting that dreams of a Chinese World Expo had first arisen over a century before, but a New China and three decades of Reform and Opening had been required to realize them.

The decision to take the World Expo to China was in certain respects unsurprising. While still a developing country when measured by per capita income, decades of extraordinary growth had brought



it to the brink of middle-income status, and the country's sheer size magnified the importance of this change many times over. Gathering international attention had accompanied its transformed fortunes, and by the end of the 20th century it had become common for commentators to speak of 'Chimerica' or even a prospective 'G2' when describing the global yin-yang of mutual economic dependence that married Chinese savings and manufacturing prowess to American consumption and intellectual property. A Chinese World Expo would mark the international recognition of an obvious reality.

Shanghai's proposed Expo theme, 'Better City, Better Life', also played its part in the choice. The most significant milestone in the history of global urbanization occurred between the decision and the Expo date, when city-dwellers accounted for more than half of the world's population for the first time, making the human condition a predominantly urban one. Despite the essential connections to urban development and experience that had characterized the World Expo since its origin, cities had never previously been adopted as an explicit theme. Their time had clearly arrived.

'Better City, Better Life' spoke not only of cities, but also of improvement, and vitality. These traditional Expo refrains, inseparable from the drive to modernization and the appreciation of modernity, had become increasingly attenuated as the modern world lost itself in doubt, ambivalence, and catastrophe. During the 20th century, worldwide intellectual opinion largely disassociated itself from the promise of improvement, or splintered into warring sects over its meaning and the ways to achieve it. Amidst such schism and disillusionment, vitality was degraded into fanaticism or lassitude, and the World Expo lost its way. Now, in the early years of a new millennium, borne by incontestible developmental evidence, the prospect of betterment was being raised again, without irony or apology, and the world seized the moment. ✖

If we are chosen, we will prove with our hard work and wisdom that you have made the right choice.

– Wu Yi, head of China's national bidding commission, before the decisive vote to select Shanghai as the host city for World Expo 2010, on December 3, 2002.

The Decision is Sealed

In the final weeks of 2002, representatives from the BIE's 89 member countries gathered in Monte Carlo, in the European micro-state of Monaco, for the 132nd BIE general assembly that would select the host city for the 2010 World Expo. This was a particularly weighty decision, since recently formalized rules meant that the event would be on the largest scale, a category 'A' fair (popularly described as 'Universal'). Since the turn of the millennium, such uncircumscribed, history-making fairs were strictly scheduled for all years divisible by five.

After decades of slippage and disappointment, the future of the World Expo as an event of genuine global significance hung in the balance.

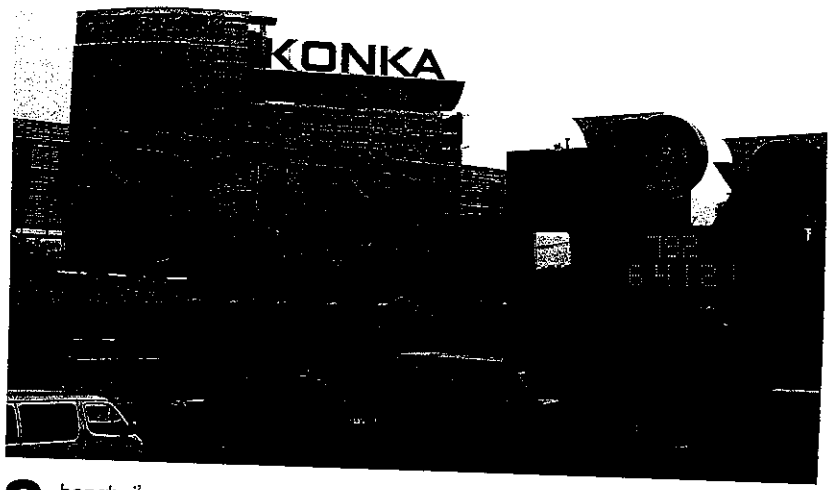
Unusually, none of the final candidates for this honor were located in wealthy nations with long Expo-hosting experience. Instead, they represented a variety of developing countries, on very different historical trajectories, and from an exceptionally wide range of world cultures. Alongside Shanghai, the four other candidates were the Russian capital Moscow, Queretaro in Mexico, Wroclaw in Poland and Yeosu in South Korea. Whichever of these five cities had been chosen, the result would have been a World Expo celebrating development in an increasingly decentralized global economy.

Competition was fierce, with all of the candidate cities making repeated presentations as they attempted to sway opinion in their favor. The voting process went to a fourth round before a clear winner emerged. Finally, on the evening of December 3, 2002, Shanghai was selected by a solid margin of 54 votes, out of 88 cast.

Throughout this process, the fact that World Expo 2010 would be a fair for the developing world had never been in doubt, but the choice of Shanghai, China, meant this aspect of the forthcoming event would be expressed with maximum intensity. As the most rapidly developing of the contenders, China had become a global symbol for economic emergence. A World Expo held in the country, even – or perhaps especially – in its most developed city, was destined to restore a raw progressive vigor to the event that had not been remotely approximated since the 19th century.

In 2002 the World Expo voted to renew its original commitment to the basic impetus of history. In 2010, the result was exposed to the world.

Countdown



Shanghai's success in Monte Carlo was greeted by the English-language China Daily headline "Countdown starts for Shanghai Expo." Almost immediately, countdown clocks began to appear at strategic points around the city, conspicuously chipping away the time remaining. Large LED displays began their minutely-fractioned digital descents to zero in Shanghai's major shopping hubs and outside the main entrance to the city's Urban Planning Exhibition Hall (UPEH). Less finely-grained day-by-day countdowns became standard fixtures of Expo-related websites, including the official website (at en.expo2010.cn). As new thresholds were passed, with the shrinkage of the years, or transitions through decimally significant magnitudes (200 days, 100 days ...), new countdowns began. Despite the digital electronic modernity of these counts, they drew upon a technological schema for time apprehension with deep and ancient roots in Chinese civilization (see pp.146-7).

In September 2008, the Shanghai municipal government launched a '600-Day Countdown to the World Expo' campaign, designed to prepare the city's service systems and culture for the event. Included under the umbrella of the campaign were monitoring projects to ensure that public and private service personnel in all relevant fields and at all levels were ready to meet the visitor influx, combined with public education initiatives to promote etiquette (see p.220). The government tasked an independent review body with surveying, evaluating, and publicizing progress at 100-day intervals. An associated 'Three Fifth' campaign devoted the 5th, 15th, and 25th days of each month to specific themes related to courtesy and civility.

In the depths of the world financial crisis, a one-year countdown clock to the event was solemnly launched in Beijing's Tian'anmen Square by Wu Bangguo, chairman of the National People's Congress Standing Committee, accompanied by

Chinese Down Time

While countdowns are far from unknown in the West, they run counter to very basic assumptions built into the mechanical arithmetic of clockwork, which depict the progression of time as a process of successive addition, and – more metphorically – as a heaping up. The modern world has reinforced this chronological sensibility by associating the passage of time with growth and accumulation, graphically represented by the ascending curves of diagrams describing population increase, economic expansion and the general upward trend of social indicators of every type. There is no more iconic image in this respect than the popularization of Darwinian evolution, characterized as a process of ascent, that shows an ape creature erecting itself in stages to a climactic state of proud human verticality. For this reason, Western cultures do not provide a good preparation for Chinese intuitions about time – held with remarkable consistency and reinforced by the usage of ordinary language – which depict the course of time as a descent.

Chinese is a tenseless language, with time orientation marked by specific terms rather than grammatical particles. Among the most common and elementary of these time words are those for 'up' (shang) and 'down' (xia) used to denote the past and future respectively, corresponding to the adjectival usages of 'last' and 'next' in English. While it is quite natural for English speakers to assume a 'flow' of time, Chinese is far more precise in the attribution of a hydraulic quality to such flow, with inexorable downward tendency.

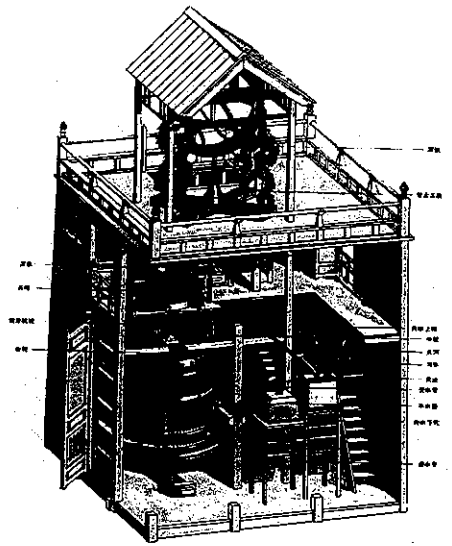
If Western time intuitions are composed from a wide variety of sources, including rising graph lines, astronomical cycles and riverine metaphors, the Chinese sense of time seems to have been more throroughly disciplined by the workings of a particular time-keeping technology: that of the water clock (clepsydra). Second only to the sundial (gnomon) in antiquity, water clocks have dominated time-keeping throughout millennia of world history. It is only in recent centuries that their position has been eclipsed, following the emergence of pendulum clocks in Europe during the late Middle Ages. In China, where hydraulic technologies of all kinds have always been strongly emphasized, the appearance of the first water clocks has been dated back as far as 4,000 BC.

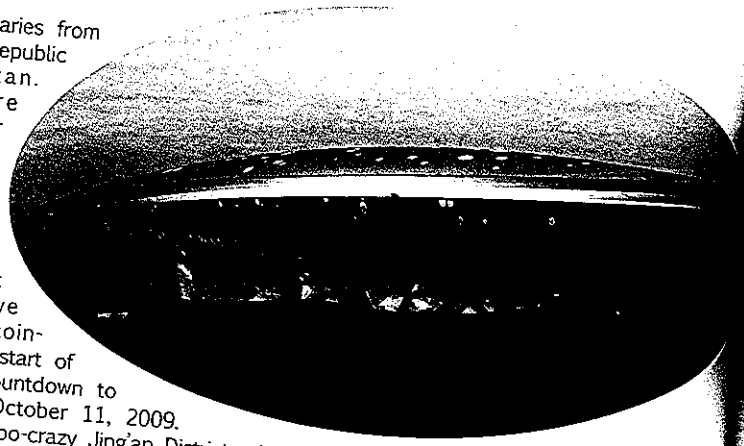
Water clocks align the arrow of time with gravitational attraction, while modeling time tangibly as a continuous fluid, not only homogenous, amorphous and (apparently) infinitely divisible, but also elevated in abstraction by its lack of opacity, flavor or odor. Where sundials and mechanical clocks tell the time without exhibiting it, revealing it only through a mark or sign, water clocks appear to substantiate duration itself in their hydraulic mechanism, supporting an apprehension of time that has demonstrated enormous cultural influence and imaginative plausibility.

The Chinese water clock reached a level of sophistication unparalleled in any other society. The most celebrated instance was the Cosmic Engine of Su-Song (AD 1020-1101), described in his horological masterpiece the Xinyi Xiangfayao (新儀象法要). Standing 13 meters tall, this astounding machine included a rotary hydraulic drive, a secondary pressure compensator tank, an escapement mechanism and a drive chain, powering the multiple revolutions of an armillary sphere. Understandably enough, this technological wonder attracted the rapt attention of the great sinologist Joseph Needham.

In the working of a water clock time quite literally runs out, describing a descent into the future. Time is represented by a finite volume of water that expends itself at a regular rate, counting down towards zero.

An intriguing appendix to this story is added by Simon Winchester (a modern student of Needham). In his 1996 book The River at the Centre of the World: a journey up the Yangtze, and back in Chinese time, Winchester comes close to envisaging the entire country as an enormous water clock, counting down to Shanghai: "As the river flowed, so had China flowed as well," he writes. "The riverside cities that lay close to the sea, for instance, tended to be the cities that had been affected by more modern times. The towns and villages that lay up in the headwater hills, on the other hand, were ancient, or had lain untouched and unspoiled for centuries. Upstream was ancient; downstream was more modern. Downstream was today; upstream was yesterday."





foreign dignitaries from the Czech Republic and Pakistan. Hopes were expressed for a rapid restoration of international economic fortunes.

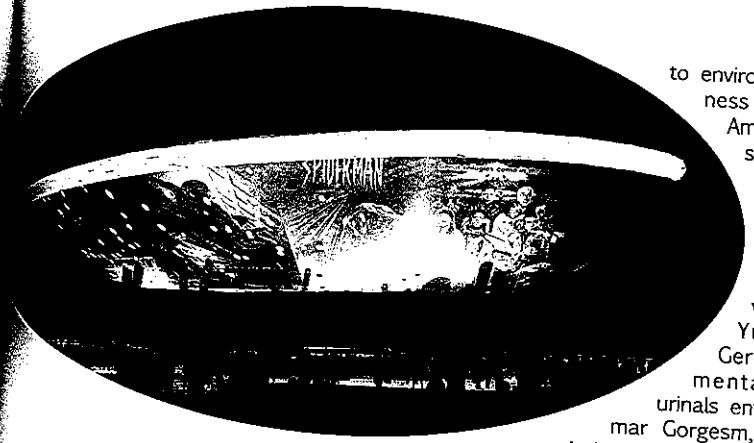
The most comprehensive celebrations coincided with the start of the 200-day countdown to the Expo, on October 11, 2009. In Shanghai's Expo-crazy Jing'an District, where 57 Expo-related events had already been staged, the date was marked by a giant festival involving 20 dancing teams. Elsewhere in the city, roughly 13,000 people participated in a wild 'Haibao Dance' that involved dozens of girls dressed as the Expo mascot. An Expo countdown concert at Shanghai's Grand Theater (broadcast live by Dragon TV) gathered 40 stars and celebrities from Andy Lau, Coco Lee, Tsai Chin, Sky Wu, Vivian Hsu and Peter Ho to Li Bingbing and Huang Xiaoming, as well as TV 'Super Girls' Zhang Liangying and Shang Wenjie, and New Age singer / songwriter Sa Dingding, for a performance of Expo songs (see p.150). NBA star and Expo ambassador Yao Ming (a Shanghai native) delivered the message: "Better City, Better Life! Let's cheer for the Shanghai Expo. Best wishes for the countdown concert."

More soberly, the 200-day countdown saw the opening of a show in the Shanghai Exhibition Center (1000 Yan'an M. Rd) devoted to the Expo. The World Expo 2010 Exhibition had been previously held in Beijing's Capital Museum (from July 5-27), where it drew almost 100,000 visitors. The Shanghai version occupied 1,200 square meters, and included photographs, diagrams, models and multimedia displays, describing pavilion plans, the Expo site layout, and the history of the event. Over 5,000 visitors were received during the show's first half-day. During the period of this exhibition, from October 13-26, Shanghai's semi-permanent Expo Exhibition Center (300 Huaihai M. Rd) was temporarily closed for renovation.

In Germany, the five-day Frankfurt International Book Fair opened on Oct 13, coinciding with the start of the 200-day countdown. In total and in all languages, 7,600 books from 196 publishers covered various aspects of the 2010 Shanghai World Expo, including 73 English-language titles. China was selected as 2009 Guest of Honor at the Fair.

On October 12, the 1,000-sqm Expo Future Store opened in Shanghai (6/F, 558 Nanjing E. Rd), with a fully-automated sales system and a range of 3,000 official Expo products. The RFID system employed in the store was a test-run for more ambitious applications at the Expo Site itself (see pp.228-9). In total, official sales of Expo-related merchandise from 320 official outlets in 47 cities reached RMB 1.2 billion by mid-October, with products sourced from roughly 60 manufacturers by the Expo organizer.

BIE Secretary General Vicente Loscertales participated in the celebrations by presenting certificates to the first 12 'Expo Stars' selected for their contributions



to environmental awareness and lifestyles. Among those chosen were Beijing University professor of conservation biology Lv Zhi, environmental web-activist Yuan Xingwei, German environmentally friendly urinals entrepreneur Ditmar Gorgesm, Expo-themed painting competition winner Guan Zhiquan, and two students recently returned from China's Antarctic expedition.

In December, 2009, with the 100-day countdown about to begin, the People's Bank of China announced the release of special 2010 Shanghai World Expo coins, and China Post prepared to issue Expo stamps. Expo organizers finalized the arrangements for on-site retail outlets, recruiting companies to sell licensed souvenirs. Registration of Chinese reporters to cover the event began. Shanghai's Zoo and Shanghai Wildlife Park readied themselves to receive ten pandas (four males and six females) from the Wolong Giant Panda Reserve Center in Sichuan Province, completing accomodation for the animals and the arrangement of food supplies (see p.64). Throughout the city, infrastructure projects were finished, or entered their final stages. The shape of long-anticipated structures emerged, new metro lines opened, and at the Expo site itself computer-generated images were gradually replaced by physical realities.

The last 100 days of preparation included the Spring Festival (Chinese New Year) festivities, which fell on February 14 in 2010. Traditionally, the country's migrant workers head home for this occasion, leaving the construction sites of large metropolitan areas for rural areas and towns in China's less-developed provinces and areas. The prospect of this interruption added unwelcome complexity to tightly-scheduled Expo planning, and massive pay hikes were introduced to encourage workers to stay in the city. The Expo Boulevard even saw an oath-taking ceremony, at which construction workers pledged solemnly to complete the project on time, but for many migrants the seasonal call home was too strong to resist.

As the countdown descended to double digits, construction of the five permanent Expo structures reached completion, allowing interior decoration and exhibition preparation to begin in the newly finished China Pavilion, Theme Pavilion, Expo Center, Culture Center, and Expo Boulevard (see pp.230-5). In addition, the landscaping of parks and green areas that accounted for almost a third of the site was essentially completed, as was construction of the site's 42 rented pavilions and 11 joint pavilions. Among the roughly 100 foreign pavilions, construction was estimated to be 70% complete, and work continued on roads, parking lots, shuttle bus stations, public spaces, support facilities, and amenities. Increasingly demanding trial operations had been scheduled for April, with the Expo site successively opening to 100,000, 200,000 and then 400,000 visitors, approaching its average capacity. On May 1 the count reached zero, and World Expo 2010 began. ✱

Pop Goes the Expo

Shanghai's 200-day countdown concert brought popular music stars from around the region to perform around 20 Expo songs, chosen from among 4,000 submissions received from China and around the world. The gala was especially notable for the input from beyond the mainland, by stars of 'Gangtai' (Hong Kong and Taiwan) pop, and others.

Taiwanese performers included Ho and Hsu, singing the etiquette-minded 'Say Hello With a Smile' in soft rap style, and Chris Yu, in duet with mainland talent-show winner Qi Wei, singing 'Shining City' – written by a mainland high school student. A cross-regional performance brought together Taiwan-based Singaporeans JJ Lam and A-Do, Singapore-based twin girl band By2, and the mainland's Jin Sha, to sing the Expo rhapsody 'The Wing of Dreams'.

Celebrated Han-Mongolian folk star Sa Dingding combined world music with Chinese folk melodies in a performance of the song 'Our Expo', while a specially assembled pop supergroup of mainland, Hong Kong, Taiwan and Singaporean stars (including Andy Lau, Coco Lee, and 'Supergirl' Zhang Liangying, among others), sung 'Smile Shanghai', a composition written especially for the countdown event. Among other performances were Guan Zhe's 'Charming Shanghai', Gigi Leung's '2010 Waiting for You', Sky Wu's 'Better City, Better Life', Zhang Liangying's 'Painted Heart', and 'Colorful World' by pop band Blue Garden.

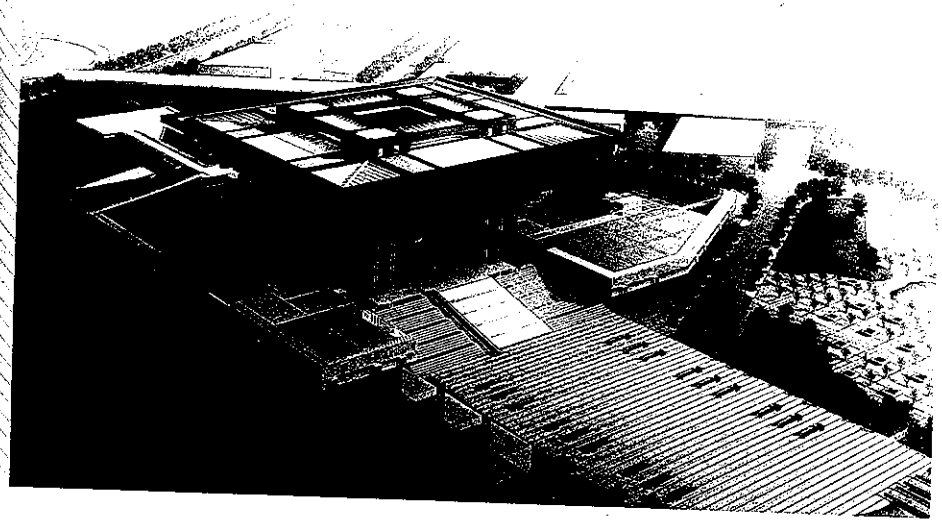
Eminent Commentary

世界百位名人
谈上海世博

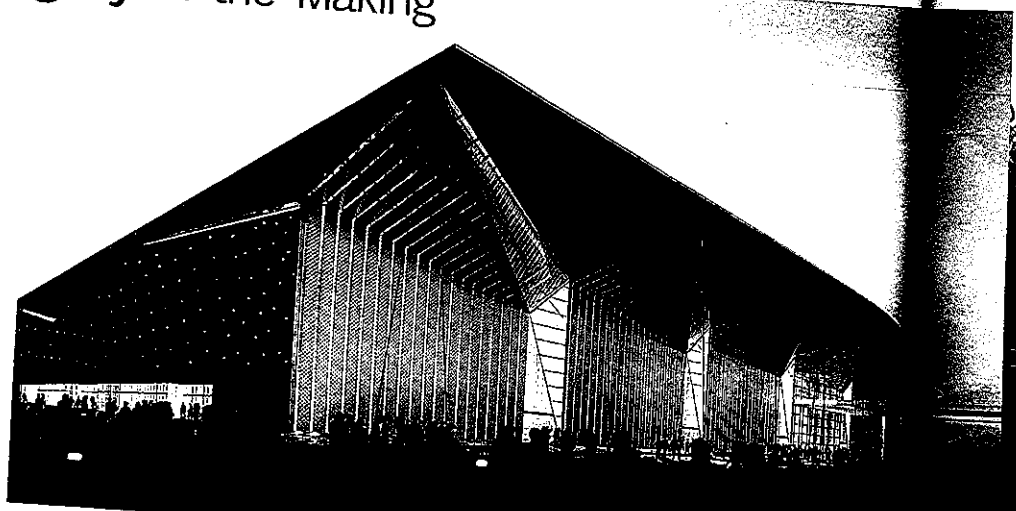
Even before opening on May 1, 2010, the Shanghai World Expo was not only in many ways remarkable, but also in many different ways remarked upon. To catalyze this commentary, event organizers took the initiative and explicitly invited discussion. In September 2009 the Information Office of the Shanghai Municipal Government, in cooperation with the Bureau of Shanghai World Expo Coordination, the Shanghai Institute for International Studies, and local media (Jiefang Daily, Wenhui Daily and Shanghai Daily), organized a project entitled '100 Celebrities Worldwide Talking About Expo 2010'.

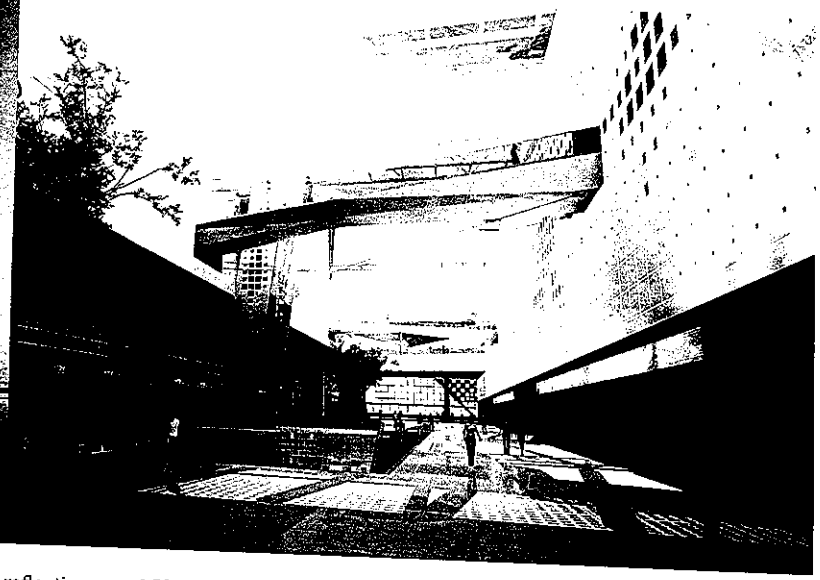
Experts and opinion leaders from around the world were sought out for comment, including major political figures, scientists, architects, economists, writers, artists, sports stars, and others. Among the illustrious voices collected are those of Hebrew University of Jerusalem game-theorist Robert John Aumann; Dunhuang archaeologist Fan Jinshi; London Mayor Boris Johnson; ICRC President Jakob Kellenberger; former US Secretary of State Henry Kissinger; Singaporean ex-Premier and statesman Lee Kuan Yew; leading Chinese economist Li Wuwei; Nobel Laureate chemist Mario J. Molina; University of Harvard mathematician Shing-Tung Yau; President of Japan's Waseda University Katsuhiko Shirai; UNEP Executive Director Achim Steiner; Nobel Laureate physicists Tsung Dao Lee and Chao Chung Ting; painter Wu Guanzhong; and Chinese Academy of Engineering President Xu Kuangdi.

All 100 remarks were published in Shanghai's newspapers from the beginning of the 100-day Expo countdown, on January 21, 2010. They have also been compiled at the official Expo website, en.expo2010.cn/sr/100eminent/index.htm



Legacy in the Making





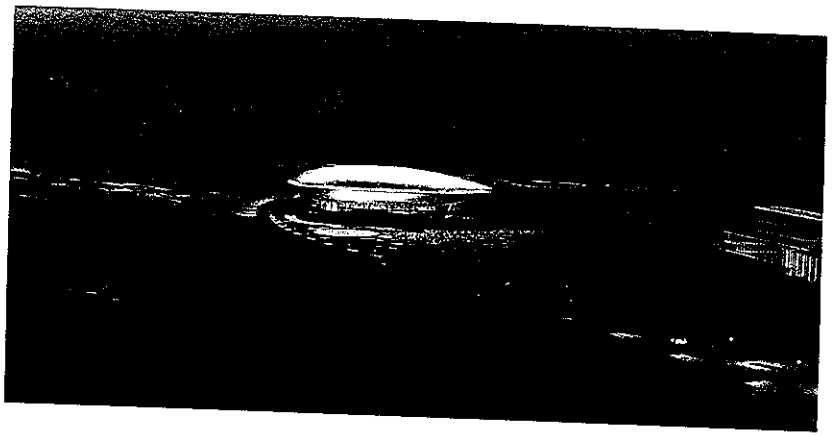
At China's 11th National People's Congress, in March, 2010, Shanghai deputies reported on the state of preparations for the World Expo, ranging from urban infrastructure and site construction to environmental measures and cultural campaigns. The event was repeatedly related to Shanghai's aspirations to become an international financial and shipping center, which were established as a national strategy by the State Council in 2009. The context of global financial crisis was invoked as a factor lending the Expo additional meaning. According to NPC Deputy and Shanghai Municipal Government Official Wang Zhan, "This year's World Expo has become increasingly important against the backdrop of worldwide financial crisis. It provides us with a platform to explore directions for the global economy, and the implications of technological breakthroughs."

Analysts cited at the NPC expected the event to accelerate Shanghai's economic development by a decade, with enduring consequences following from an upgraded industrial structure. Implicitly referring to the country's recent 60th anniversary celebrations, reporter Feng Ling noted that many of those attending the Congress foresaw the 6-month 'showcase' leaving a legacy that would last for six decades.

For a troubled world economy, World Expo 2010 offered a glimpse of better times ahead, supported by continuously accelerating technological transformations, new, environmentally-softened industries, and an expanded sphere of international trade. For a reborn China, it represented the natural culmination of a three-decade commitment to openness, accompanied by a visitor influx of unprecedented proportions, worldwide popular, media, and diplomatic attention, and grassroots dealmaking on an epic scale. For the city of Shanghai, it marked an evolutionary threshold of scarcely estimable significance, focusing and intensifying a trend to cosmopolitan development that reached to the very quick of its globalized, metropolitan identity.

For the World Expo as an institution, however, the importance of the 2010 event was, if anything, even greater. The largest fair in history offered an occasion for reflection on 160 year's of World Expo heritage, and a unique opportunity to reanimate it. At the beginning of an Asian or Pacific Century, when the forces of global modernization had never seemed further from exhaustion, the World Expo faced a fundamental choice: To revitalize its traditional allegience to the arrow of modernity, or to perpetuate an erratic but relentless slide into irrelevance. Whichever path World Expo would take, modernity was set to advance regardless, with a speed and breadth unparalleled in history.

Would 2010 be remembered as the year in which World Expo, global modernity's great festival, awoke at last from decades of doubt-clogged slumber? The answer was yet unwritten, but a refashioned world awaited it. A legacy was under construction. ✖



Expo Expectations

A nationwide survey, conducted by online poll during the period November to December 2009, provided solid numbers to describe World Expo expectations among the Chinese public. The poll, organized by international market researchers Millward Brown-ACSR and Ogilvy, questioned 14,333 people about their attitudes and intentions towards the event. The results were publicized in late January, 2010.

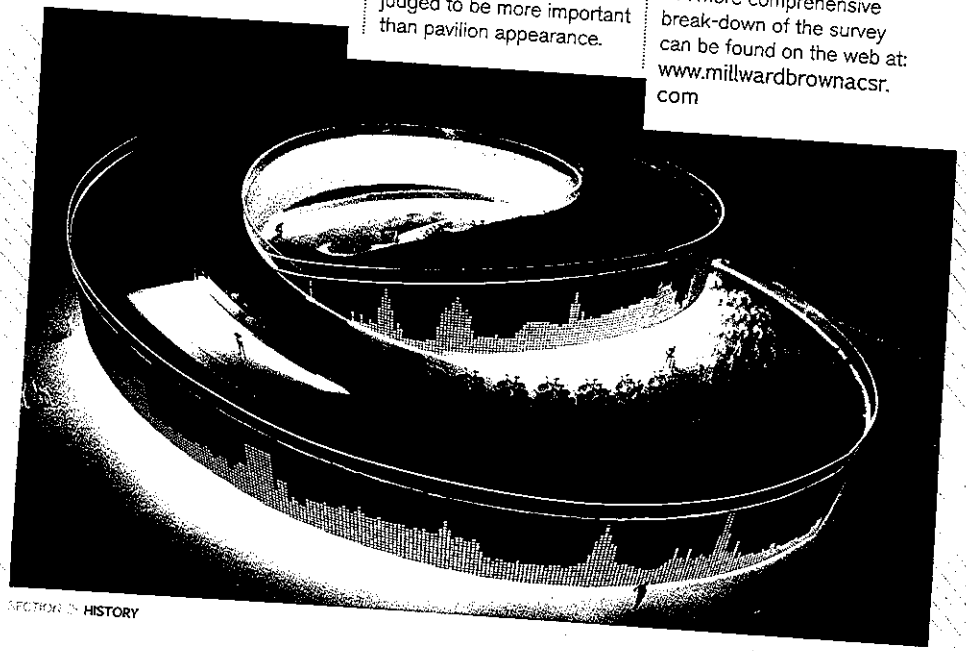
It found that just 28% of the Chinese population had a good awareness of the Expo, suggesting that even within the country promotional efforts had considerable work to do. An additional 58% had limited awareness, with the remainder knowing little more than the name of the event. However, no less than 44% expressed an interest in visiting the Expo, and 11% said they would definitely do so. Among Shanghai residents, fully 87% intended to visit, with 47% firmly intending to. Among all respondents, television was the most common source of information about the Expo, followed closely by word of mouth, and Internet. Over 35% had visited the official Expo website on at least one occasion.

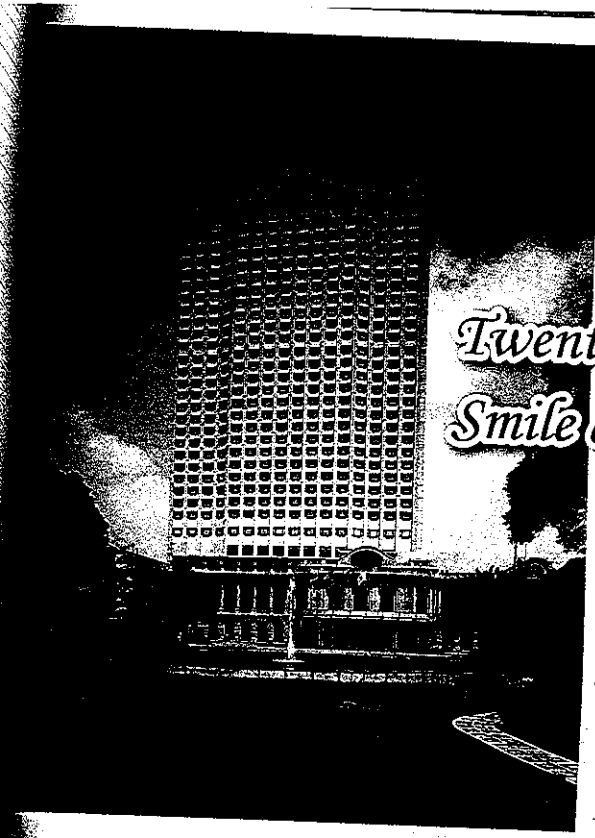
When asked about their interest in specific national pavilions, 90% of those expecting to attend the event said that the decisive factor in determining their level of interest was familiarity with the country concerned. Pavilion themes ranked second as an important consideration. Art and culture, hi-tech experience, interactive experience, and short queues were all judged to be more important than pavilion appearance. Celebrity appearances were ranked low on the scale, with just 21% saying it would influence them.

The USA was judged 'familiar' by 73% of respondents, and 48% expressed the intention of visiting its national pavilion. The French pavilion came second, with 38% intending a visit. Japan and the UK shared third place (at 32%), followed by South Korea (28%), Germany (25%), Egypt and Singapore (tied at 23%). Among corporate pavilions, interest in that of China Telecom / Mobile ranked highest, at 47%.

The beauty competition was won by China's pavilion, judged 'very attractive' by 62% of respondents. Runners up were Denmark (55%), Finland (53%), and Singapore (50%).

A more comprehensive break-down of the survey can be found on the web at: www.millwardbrownacsr.com





20th Anniversary

Twenty Years of Smile and Satisfaction

The Okura Garden Hotel Shanghai is a five star hotel situated in the city center, enjoying excellent connections to the EXPO area using the adjacent subway station. The hotel has infused contemporary sophistication into the old world charm of the former French Club and its seven-acre garden.

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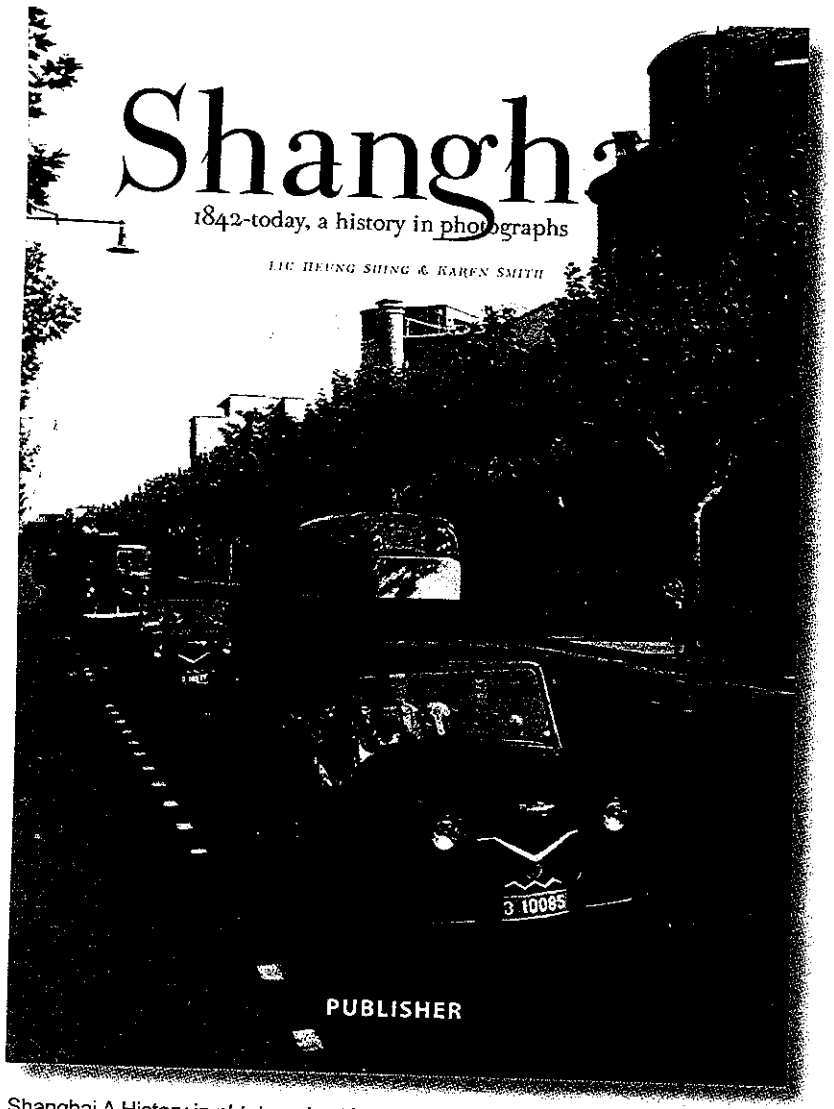

Shanghai A History in phtotgraphs,1842-Today

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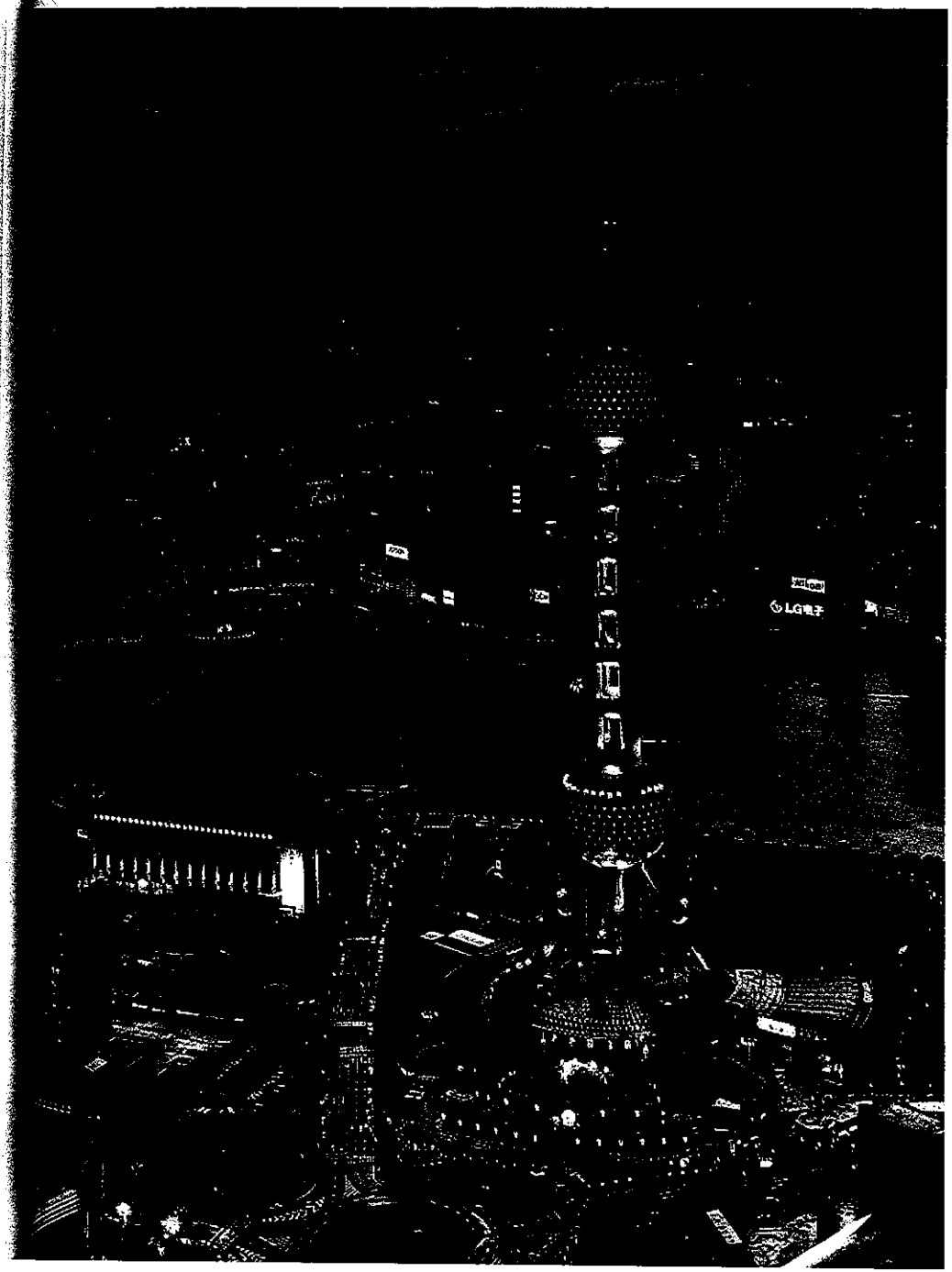
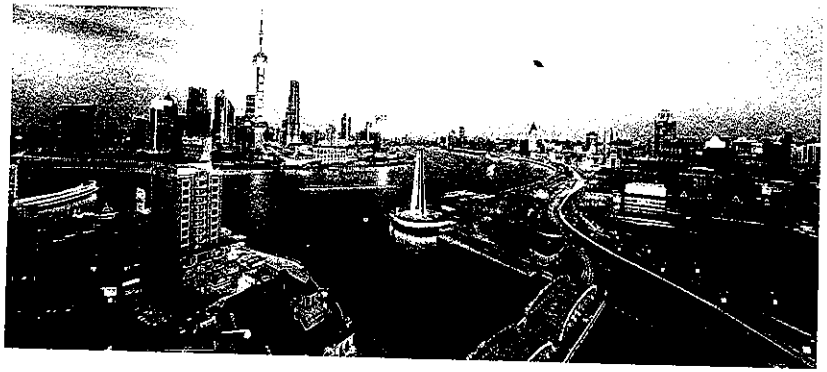


Urban Exposure



Universal expositions are essentially urban phenomena. They take place in cities, and the cities that host them are typically among the largest, most advanced and influential urban centers of their age. City and event become intimately entangled in a spiral of reciprocal promotion and development. The degree of mutual involvement is such that an Expo can be adequately referenced by nothing more than the bare space-time coordinates provided by the name of a city and a date. As with the long series of name-number couplets before it, the expression 'Shanghai 2010' will be bound forever to an episode in the series of world expositions.

Cities accomodate Expos, significantly define them, participate in their glories, and absorb some (substantial) fraction of their impact. They also find themselves reflected in Expos, both specifically and generally. Most basically, every Expo turns a city into a tourist destination, and thus an object of mass attention. World Expo attendances regularly match the total populations of medium-sized countries. The final attendance figures for Shanghai's 2010 World Expo will reveal that between 1-2% of the entire human race visited the event. Domestically, at least 5% of the Chinese population is expected to visit Shanghai for the Expo. Whilst unprecedented in absolute numbers, this would still be comparatively modest in proportional terms. It is not uncommon for over a quarter of a national population to visit their Expo city during the period of the event (as occurred in Chicago 1893, Paris 1900, Brussels 1958, Montreal 1967, and Osaka 1970, among others). Of course, this also suggests that official attendance estimates publicized prior to the Expo might have been misleadingly conservative.

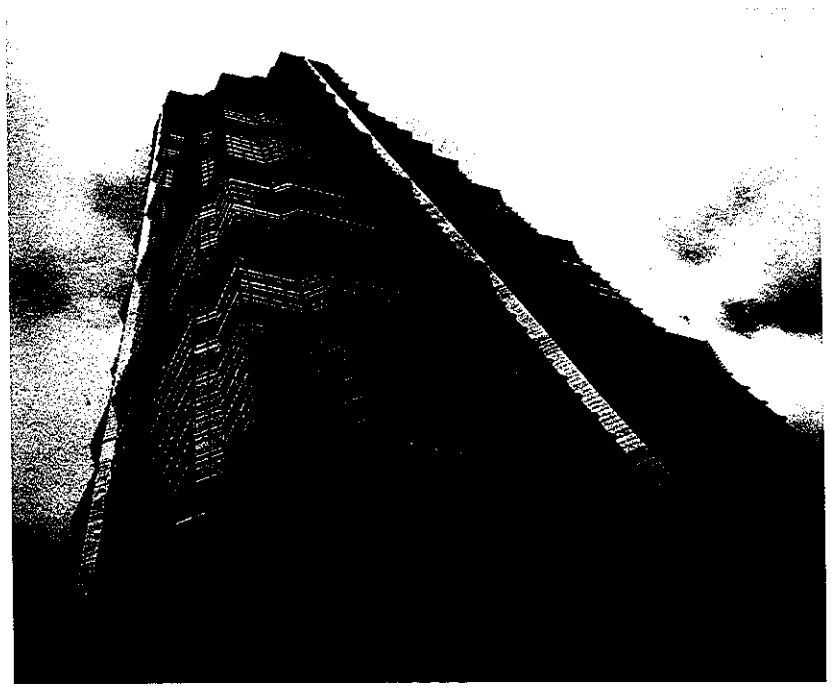
Throughout its history, the Expo has been energized by creative tensions between the principal levels of large-scale social organization, provoking a prolonged public meditation upon relations between the individual, the city, the nation and the world – perhaps even the universe. The Expo makes its host city into an object of both domestic and international attention and appraisal, exposing its distinctive cultural and physical features, its organizational competence, and its spirit of hospitality to minute examination by thousands of participants and millions of visitors. Of no less significance, however, is the opportunity it provides for the city to look outwards, to reflect upon its position within a larger social cosmos, to define its unique perspective upon the world and to re-envisage itself within these larger contexts, informed by the perceptions of outsiders, by historical and geographical

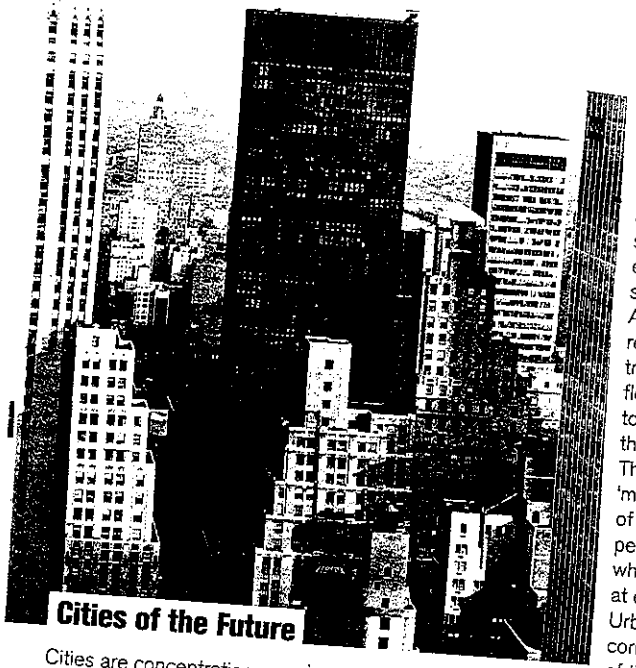
comparisons, and by its own heightened sense of responsibility as an agent and emblem of global development, and as the representative of a clearly – even ritually – defined moment in world history.

The host city must explain itself to the world, enumerate its attractions, bravely acknowledge its problems, and guide visitors through its labyrinth. For many cities, the Expo consitutes a critical moment in the development of its identity, offering a precious opportunity for relatively undistracted and co-ordinated self-regard, for sustained re-imagination, and for stimulated self-improvement (bolstered by substantial investment in infrastructure). During the six months of the event, the city becomes the world's fairground, inundated to the point of intoxication by dazzling myriads of ideas, opinions, tastes, dreams, and inventions. Its cosmopolitan capacity for cultural absorption is uniquely tested, and permanently expanded.

Conceived as an event, or a production, the Expo is itself a complex social undertaking that has an intrinsic affinity with the urban environment and its capabilities. Like many of the activities that naturally gravitate towards the metropolis, it is a large-scale, highly-organized, capital-intensive and technologically-demanding operation, dependent upon an enormous range of sophisticated engineering, design, logistics, communications, coordination, public relations, media, marketing and entertainment competences that presuppose an exceptional concentration of talent and resources. Only a city can provide such services, and even were a wilderness capable of staging an Expo, it would become a city by doing so.

The Expo tests and stretches a city, serving as a stimulus and a laboratory for innovations in urban organization and design, especially in regards to public





Cities of the Future

Cities are concentrations, defined not only by mass, but also by density. They represent the largest compact units of human social organization. As such, they exhibit strong characteristics of individuation. Their names are not merely arbitrary labels, but the markers of singular beings, with distinctive features, personal characteristics, and unique destinies. The more intense the urban process, the more substantial the singular reality. City's are loved, or hated, as people are.

Because they are intensive, concentrational beings, when cities become themselves, they become more so. They grow and advance, realizing their potential by crossing new thresholds, experimenting with social possibility. Their most characteristic architectural form is the skyscraper, the definitive expression of concentrated development, realizing unprecedented social densities in a vertical race that continuously extends the limits of technological, economic, and aesthetic capability. Like cities themselves, skyscrapers have true names that describe unique personalities. They characterize a city, like physiognomical traits.

As cities concentrate people, they dynamize and volatilize them. The amassing of population is already a dynamic phenomenon, but it only touches upon the effect of urbanization. When people become urbanites, they travel more, their tendency to migrate increases, and their relation to tradition becomes selective, flexible, and discerning. Social science has found that even walking speeds are scaled to the size of cities. At least as much as they are residential areas, cities are traffic systems, consisting of flows. A chronic vulnerability to traffic problems drives their self-transformation. The persistence of cities is 'metastable' on the pattern of living organisms: a perpetual turnover of parts, which are metabolized at ever higher rates. Urbanization directly correlates to an acceleration of the world.

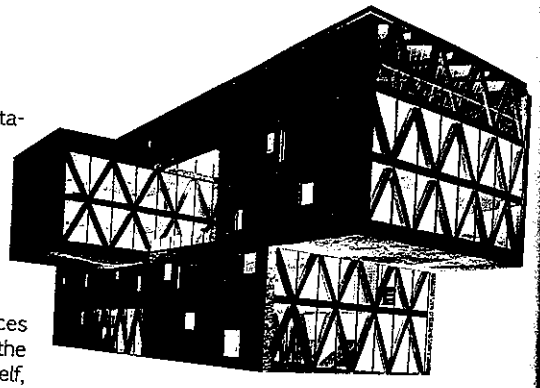
Recent history has

revealed that cities grow up into megacities. There are various (inconsistent) definitions of a 'megacity' or 'megalopolis', but the most common usage restricts these terms to cities with populations of at least 10 million and densities of no less than 2,000 per square kilometer. Under this definition, New York was the world's only megacity in 1950. By the turn of the millennium, 17 such megacities existed, with the largest (in descending order) being Tokyo, Seoul, Mexico City, New York, Mumbai, Delhi and Sao Paulo, with Shanghai placed eighth, just ahead of Los Angeles and Jakarta. Shanghai is the only Chinese city to make the 2006 top ten. Of these ten, six are Asian (the others all belonging to countries in the Americas).

In 1950, Europe had 10 of the world's 25 largest cities, but by 2006 it had just three and by 2015 it is expected to have none. Only two U.S. cities – New York and Los Angeles – rank among the world's megacities. At the dawn of the 20th century every one of the world's ten largest cities was located in Europe or the United States, but the largest – London – fell considerably short of megacity status, with a population of just 6.5 million.

The term 'hypercity' has been proposed for urban concentrations with populations of over 20 million, a threshold recently crossed by Shanghai. According to an alternative, looser and consequently even more dramatic definition, megacities are conceived as 'continuous urban agglomerations'. This would provide the basis for apprehending a Yangzi River Delta Metropolitan Area, with Shanghai as primary hub and a total population comfortably exceeding 87 million.

When cities change in size they also change in nature. Subtle refinements in occupational specialization and higher intensities of connectivity (social communication) trigger unprecedented modes of production and thinking. In addition, the problems of urban concentration, from traffic congestion and pollution to stress and addiction, tends to stimulate creative solutions with wide social applications. For these reasons, the growth and proliferation of megacities have tremendous implications for the speed and direction of social, cultural and economic development. Considered as real individuals of a recently-emerged type, megacities are the most consequential agents in the world, guides to the future, and keys to the meaning of history.



amenities from transport and sanitation to electrification and entertainment. In recent decades, as environmental considerations have come to play an ever greater role in Expo planning and organization, green visions have also found a passage to realization at the event. Just as the city focuses and forces the trends of the wider society, so the Expo prompts change in the city itself, raising the distinctive urban phenomenon to a second power, re-concentrating it, like a Matryoshka doll. When compared to the host city, the Expo site, as a micro-cosmic city-within-the-city, is more futuristic, more intense, more fluid, busier, faster, and more thoroughly saturated with the signs and premonitions of social destiny. It turns the urban trend back upon itself, exposing and exaggerating it, with exceptional lucidity, and with maximally expanded implications.

Although the complicity between Expo and city is as old as the event itself, Expo Shanghai 2010 tightens the bond in several important respects. Not only does it take place in an extreme city, burnt vividly into world consciousness as a symbol of the emerging age, it also marks a world historical threshold in the process of urbanization, and – for the first time – takes the city as its explicit theme.

Measured by population, Shanghai is the largest city in the world's largest country. It is also the largest city to ever host a World Expo, and the first megacity to do so officially (previous megacity Expos, in New York 1939-40 and 1964-5, were unrecognized by the BIE). Shanghai's scale and geographical location is accompanied by an extreme developmental velocity that, while far more difficult to measure rigorously, is perhaps even more central to its contemporary international image and symbolism. Finally, Shanghai has extraordinary urban personality, or charisma, arising from an unusually colorful history and an attractive, self-reflective metropolitan culture. Like Suketu Mehta's Mumbai, Shanghai is a 'maximum city' that dramatically reinforces the urbanistic theme of World Expo 2010.

In or around the year 2007, urban existence became the normal human condition, as the process of urbanization dilated to encompass a majority of the world's population for the first time. World Expo 2010 is the first Universal Exposition to be held in a predominantly urbanized world, at a date when the continuing flood into cities is expected to have already enveloped 55% of the human race (marking a 10% reduction in the world's residual non-urban population in just three years). Cities have always been the future, but the future has now arrived.

Given these long-term entanglements and gathering trends, it might seem astonishing that World Expo 2010 is the first to take the city as the explicit focus of its attention. Its theme 'Better City, Better Life' invites participants and visitors to explore the contribution of urban improvement to the quality of life, while its Urban Best Practices Area (a major innovation of the event) provides an exhibition platform and testing ground for concrete solutions to urban problems, and for innovative contributions to the betterment of urban existence (see pp.222-6). City and exhibition are looped together as never before, in an event that displays the city within itself, as if manifesting a logical paradox in advanced urban design. Like any evolutionary being, the city is a puzzle without definitive solution. World Expo 2010 makes Shanghai its international emblem, and a provocation to open-ended reflection. ✱

Emblematic Urbanism

Every great city takes pride in a singular personality. Shanghai, with its complex and dramatic history, its intricately hybridized culture, and its powerful sense of unique destiny, is certainly no exception in this regard. Yet Shanghai has also been repeatedly embraced as an emblematic city, symbolizing universal possibilities and tendencies, to an extent that is perhaps unmatched by any other on earth. At significant moments in its history, corresponding to episodes of peculiar incandescence or 'Golden Ages', it has appeared to the world as the ultimate city, or the ultimate modern city, expressing – even through its radical impurity – something like an unsurpassable archetype of the urban condition.

From the beginning, urban culture has identified itself with 'civilization' and 'civility', juxtaposing its 'urbane' manners to those of uncultivated rustics. As centers of literacy and record-keeping, information accumulation and management, cities have been well-positioned to control their representation within the wider society. Despite assumptions of cultural superiority, the material foundations of the city are found in the rural hinterland, in a primordial dependence that is both nutritional and demographic.

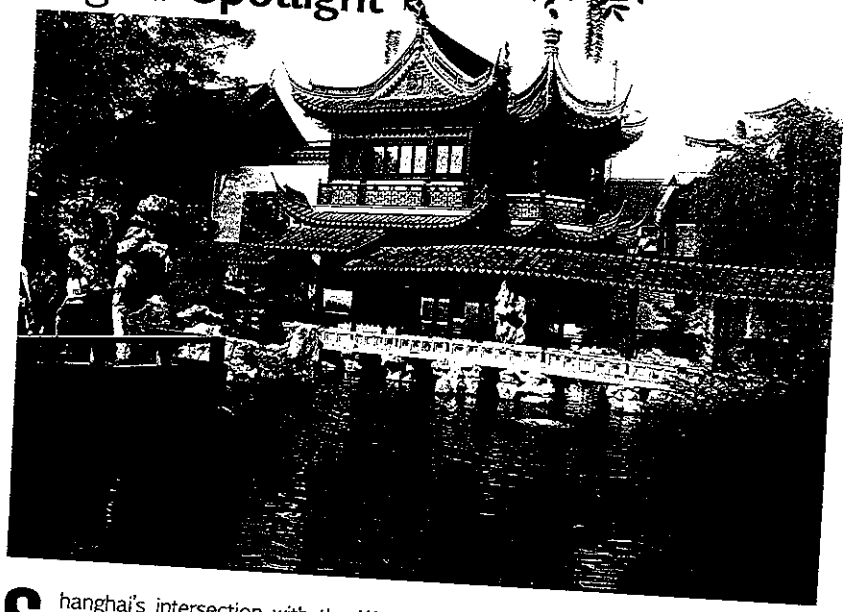
Cities neither feed, nor populate themselves. They draw their substance from the countryside, in both respects. This relationship, which has not uncommonly been denounced as exploitative, even essentially parasitic, is nevertheless essential to what a city is, how it works, and what it contributes to the world.

Because cities import their food supplies, they must trade to live. Marketplaces are basic organic functions for any city, and a commercial spirit is the natural outgrowth of urban life. Commercial development and its basic features of specialization, technological invention, financial sophistication, and communications innovation, emerge spontaneously from the urban relationship to agricultural producers. Cities must create to survive, and the result is directional history.

Urban existence does not encourage fecundity. Throughout most of recorded history epidemic diseases have ravaged concentrated urban populations, and even after the reduction of this menace by sanitary and medical advances, other aspects of city life continue to suppress endogeneous fertility. Traditional family structures are disrupted by social mobility, industrial modes of female employment, limited opportunities for relatively benign (farmyard) child labor, and new child-raising costs, especially for education. Urban families are typically small, and urban populations rarely self-sustaining. The inevitable consequences is perpetual immigration, making the city into a demographic pump, rather than a reservoir. Urban cultures must be adaptive, assimilative, flexible, and tolerant, if they are to remain consistent with the city's basic demographic reality.

Without straying even slightly from essential characteristics of urban existence, therefore, it is possible to anticipate a wide range of cultural traits, spontaneously generated from the material situation of the city. Because cities must be provisioned from without, they are outward-looking, economically sophisticated, and inventive. Because their economies are novel, industrial, and disruptive, they foster individualism, feminism, and fashion. Because their populations are continuously renewed from without, their cultures are dynamic and heterogeneous. Thus a portrait of the archetypal city emerges, one that captures – almost uncannily – the stereotypical lineaments of Shanghai.

Shanghai **Spotlight**



Shanghai's intersection with the World Expo has the characteristics of an original destiny. That, at least, was the conclusion of Chinese Premier Wen Jiabao, who described the arrival of the event as "the fulfillment of a century-old dream." It was also the presentiment of early Chinese modernist intellectuals, such as Lu Shi'e (see p.68), and Liang Qichao (see p.141), whose visionary invocations of a future Shanghai included World Expo hospitality as a central ingredient.

Modern Shanghai and the World Expo were almost twin births, widwifed within a single decade by the same forces of expansionary British capitalism. Their shared personality exhibited a highly cosmopolitan, technophilic commercialism as the dominant trait. Of course, British colonial intervention did not create Shanghai (any more than it fully possessed the spirit of the World Expo), but even the ancient city, erratically consolidating its position as a significant trading hub in China's prosperous Jiangnan region, was strangely pre-adapted to its eventual fate. When Britain burst through its doors in the 1840s, quickly followed by a long string of additional overseas powers, Shanghai accomodated itself to these new circumstances with a pragmatic – and to many compatriots quite unseemly – grace.

Shanghai was internationalized from the Bund, on the western side of the city's 'mother river', the Huangpu, to the north of the walled Old City, and south of Suzhou Creek. The word 'Bund' is derived from the Sanskrit for 'embankment' or 'dam', in an indication of the Indo-Chinese maritime and mercantile relations, substantially based upon opium, that British influence was forcing into existence, with Shanghai and Calcutta (today's Kolkata) as critical nodes. A ceiling mosaic in the Bund's HSBC Building (dating from 1923) includes both these cities, along with six others, in a symbolic depiction of the world's great financial centers.

It was on the Bund's muddy riverbank that the British established their concession, in accordance with the principle of extraterritorial administration set down in

the Treaty of Nanjing (1842). An American Concession was added, to the north, by the Treaty of Wangxia (1844), and a French Concession, to the south and west, by the Treaty of Whampoa (later in the same year). Construction in these areas proceeded from 1845, under terms laid down by the Sino-British Land Regulations, and subsequent Sino-French (1849) and Sino- American (1854) agreements. Preparations for the first World Expo, London's Great Exhibition of 1851, thus coincided with the physical emergence of colonial Shanghai, as wharves, warehouses, and adminstrative buildings grew up to support the burgeoning merchant activity. Chinese compradores from Guangdong, equipped with the commercial and linguistic skills needed to act as economic intermediaries, transplanted their expertise to this new, dynamically developing setting.

In 1863, the British and American concessions were amalgamated into the International Settlement, which united the Bund waterfront with substantial northern and western extentions. The year before, France had formally declined to dissolve its concession, which maintained its autonomy throughout the colonial period, adding to the city's fractured juridical and administrative complexity.

The most fundamental transformation of the area, however, was an entirely unanticipated one. In the same year that the Great Exhibition opened in London, Hong Xiuquan's Taiping Rebellion (1851-64) erupted, plunging China into bloody chaos, with a death toll in the tens of millions. Protected from the carnage by the Shanghai Volunteer Corps and American adventurer Frederick Townsend Ward's 'Ever Victorious Army', the Western concessions provided a haven from the fighting that ebbed and flowed thoughout the Yangzi Delta and waves of refugees rolled in. It was this population influx that truly gestated modern Shanghai. Formal agreements between the Qing imperial government and the concessionary powers, that had been intended to neatly segregate the city into foreign enclaves and areas of Chinese residence, were entirely overwhelmed by the refugee flood. The concessions filled to overflowing with Chinese newcomers, packed into innovative lilong housing blocks and creating a hybrid urban culture unlike any the world had seen before. By the time the rebellion had been extinguished, not only did the Chinese population of the 'foreign city' dwarf that of overseas residents, but it also outnumbered that of the traditional 'Chinese city' by a ratio of two-to-one. By the mid-1860s, as a matter of sheer demographic fact, International Shanghai was firmly and irrevocably Chinese.

Within less than two decades of colonial encroachment, the principle of extraterritoriality, designed to facilitate the unimpeded pursuit of foreign mercantile interests, had been unexpectedly inverted. With the collapse of residency controls, International Shanghai had been reconfigured into a zone of Chinese social experimentation, and a test-bed for indigenous modernization, beyond the 'dead hand' of the sclerotic Qing imperial government. Shanghai's fractured and (on the Western side) deliberately minimalistic system of governance had created a city that was quite literally, and perhaps unprecedentedly, out of control. Exploitation, criminality, and vice exploded without serious limit, but the opportunity for cultural and economic innovation was equally uninhibited. In this sink-or-swim environment, where tens of thousands of paupers perished on the streets, China's first modernist intellectuals scanned the future, Chinese capital accumulation first acquired its modern, radically decoded form, indigenized modern fashions in art, music, and clothing were crafted and consolidated, and China's first modern architecture appeared. By the late 19th century, a second generation of modern 'Shanghainese' had melded itself together from disparate Chinese newcomers, defined itself in its own terms, and thoroughly accustomed itself to forms of culturally liberated, technologically-

infused, and commercially unrestrained existence that were lived beyond the reach of the country's central, Qing administration. Unsurprisingly, China's modernizing political revolutions, Republican and Communist, would eventually be hatched from this same urban incubator.

An especially fascinating architectural testament to this heritage can be found today at No. 23 on the Bund, in the shape of the Bank of China Building (Palmer and Turner, 1941). This edifice, the last to be added to the Bund for almost seven decades, was commissioned by Guomindang finance minister T.V. Song (Song Ziwen), with instructions that it was to be the tallest building on the parade, in direct rivalry with the Victor Sassoon's Cathay Hotel. Palmer and Turner allotted the task to local architect Lu Qianshou, who designed it in a style that initiated a highly influential Chinese inflection of Art Deco modernism. Just as this modernism with Chinese characteristics was reaching a peak of confidence, however, Japanese occupation of the foreign concessions completed the take-over of the city that began in 1937. A formative era for Shanghai, lasting almost exactly a century, had come to an end. ✖

Bund Restoration

Among the many large-scale urban renovation projects initiated in preparation for the Expo, the most ambitious has targeted the city's Bund area, the historic heart of Concession-Era Shanghai, dominating the Puxi side of the Huangpu waterfront (to the north of the Expo site). The Bund, or Waitan, stretches along Zhongshan East First Road, and addresses are often given in both, or either form.

Since 1992 the Bund had already undergone a spectacular transformation, as the long-neglected neoclassical and modern edifices of the colonial period were converted into glistening lifestyle, leisure and dining venues, complete with gourmet restaurants, art galleries and prestige-brand retail showrooms.

As the Expo approached, this metamorphosis was extended, deepened and intensified, to encompass a major restoration of 14 protected buildings making up the historic Bund Origin (abutting Suzhou Creek), thorough repair of the almost equally historic Waibaidu Bridge, the construction of the first new Bund edifice of recent times, the Art Deco-styled Peninsula Hotel, and a comprehensive reconstruction of the Bund's Zhongshan Rd traffic artery, adding three kilometers of underground road. Furthermore, the simultaneous RockBund project has extended these renovation efforts to the remarkable but previously neglected architectural heritage making up the 'Back of the Bund' (between Yuanmingyuan Rd and Huqiu Rd).

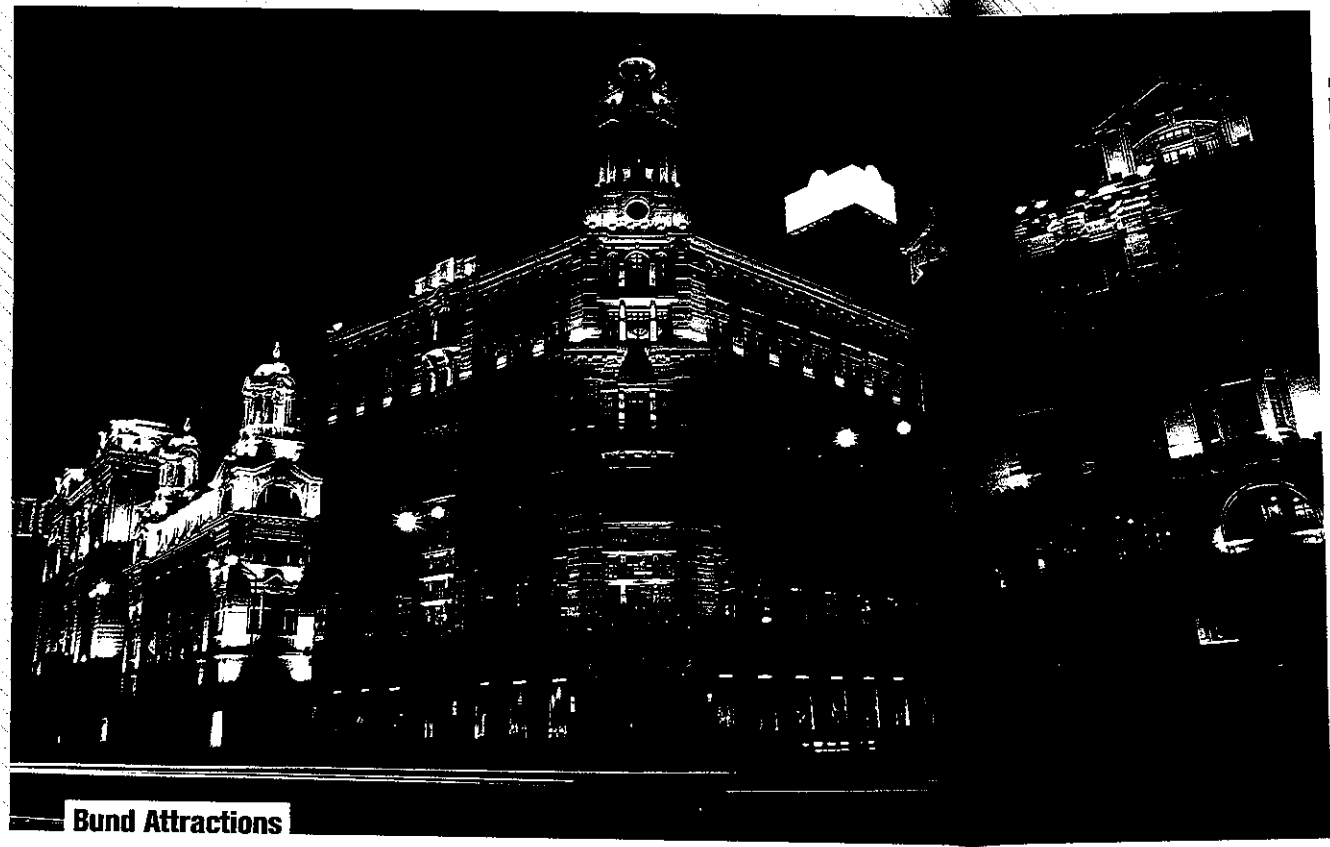
Over the course of a decade of Bund restoration, heritage sensitivity has evolved from a vague aspiration to a precise art. At the Bund Origin, the Shanghai New Huangpu Real Estate Company has employed architectural experts to hunt down old building plans, and search out tiles, fixtures and flooring materials in keeping with originals. The project covers 17 hectares at the junction of the Huangpu and Suzhou Creek, and includes the Shanghai Rowing Club, the Union Church (built in 1866), and the former British Consulate. Unimportant buildings have been demolished to create new green spaces, and Huangpu Park, at the confluence of the two waterways, has been renovated.

The RockBund project, to the immediate west of the Bund, has involved comprehensive restoration of a large number of heritage structures, most of them previously derelicted, in the largest undertaking of its kind in Shanghai history. They include the Ampire and Company Building, the Andrews & George Building, the Associate Mission Building, the Capitol Theatre, the China Baptist Publication and Christian Literature Building, the Lyceum Building, the National Industrial Bank, the Royal Asiatic Society Building, the Somekh Apartments, the Yuan Ming Yuan Apartments, and the YWCA Building.

The Peninsula Hotel (at 32 the Bund) is the first addition to the Bund in seven decades. It has been constructed and decorated in a contemporary Art Deco style, to maximize its adaptation to the area. To the south, it opens onto a new half-hectare financial square, furnished with a bronze bull statue by Arturo Di Modica (mirroring a similarly bullish sculpture by the same artist on Wall Street). An enormous plasma screen displays share prices at China's three exchanges in Shanghai, Shenzhen, and Hong Kong.

Three kilometers of new road tunnel have enabled the 11 Zhongshan Road traffic lanes to be reduced six, with buses and heavy vehicles routed through the underground passageways. Beyond the road, the elevated waterside promenade had been reconditioned, to complete a 1.8-kilometer recreational strip, extending south from Suzhou Creek to the Shiliupu Transportation Center, the departure point for river cruises and cross-river ferries.

RockBund's vivid bilingual website can be found at www.rockbund.com



Bund Attractions

The Bund parade, lining the western side of Zhongshan East First Road, is a local and international icon, one of the world's most concentrated architectural and historical treasure-troves, and a major leisure, culture, and luxury consumption hub. With the exception of the new Peninsula Hotel (No. 32), the structures existing today date back to the 60-year period from 1881-1941, when the Shanghai of the Concession-era reached a peak of prestige and influence as a global financial center and a symbol of extravagant modernity.

Following a period of post-colonial neglect, a renewed appreciation of the Bund heritage accompanied Chinese Reform and Opening, and since the early 1990s, the area has been restored and revivified. Today it contains some of the city's best art galleries, restaurants, and clubs, as well as the showrooms of international designer labels. (Buildings on the parade are numbered from the south.)

Top destinations on the contemporary Bund begin from No. 3, the old Union Insurance Company Building built in Renaissance style by Palmer and Turner in 1916. Now known as Three on the Bund, the interior was thoroughly reconstructed by Michael Graves. It opened as a high-end retail, restaurant and culture complex in 2004, home to the only Evian Spa outside France, and the China flagship of Giorgio Armani and Hugo Boss. It contains several of the city's most highly regarded dining spots, including the eponymous restaurants of Jean Georges Vongerichten (fourth floor) and David Laris (sixth floor), the Whampoa Club (fifth floor) and New Heights (seventh

niche among the city's best-known entertainment spots. M on the Bund hosts the influential Shanghai Literary Festival each year. Other notable tenants include Design Republic (ground floor) and the Oasis Spa (fifth floor). Enter from Guangdong Road.

No. 18, the Chartered Bank of India, Australia & China Building, was another Palmer and Turner creation (1923), extensively renovated by Italian architect Fillipo Gabiani of Kokaistudios, and opened in 2005 as Bund 18, complete with Zegna and Cartier flagship stores on the ground floor, as well as Boucheron, Vertu, Patek Philippe and ST DuPont boutiques. Dining and entertainment options include the lobby Sibilla Café, Tai Wan Lou, Sens & Bund and Bar Rouge. The Bund 18 Creative Centre adds fine arts to the high culture mix. In 2006, the meticulous Bund 18 restoration project received the UNESCO Asia Pacific Heritage Award.

At No. 12 and 13 stand two additional Palmer and Turner buildings of special historical interest. The Customs House, completed in 1927, still houses Shanghai customs and is not open to visitors. This urban landmark is best known for its clock tower ('Big Ching'). The Hong Kong Shanghai Banking Corporation Building next door was constructed with a grandeur appropriate to the premier financial institution of the International Settlement (and largest in East Asia). The entrance ceiling is decorated with a mosaic representing the world's greatest early 20th century financial centers. The dark bronze lions guarding the entrance are copies installed in 1997 (the originals now repose in the Shanghai History Museum). Today it houses the Pudong Development Bank.

The buildings at No. 20 and 21, originally W. Scott's Palace Hotel (1909) and Palmer and Turner's Art Deco Cathay Hotel (1929), were institutionally amalgamated as the Peace Hotel in 1956. Sun Yat-sen stayed at the Palace Hotel shortly after his inauguration as China's first republican president, in December 1911. Guests at the Cathay Hotel included Charlie Chaplin, Douglas Fairbanks, W. Somerset Maugham, Noel Coward, and George Vanderbilt. After three years of extensive restoration, the Peace Hotel was re-opened under a joint venture with Fairmount Hotels, in time for the 2010 Expo.

floor terrace). The Shanghai Gallery of Art, located on the third floor, has carved out an impressive reputation for staging thoughtful exhibitions of Chinese and International contemporary art. Enter from Guangdong Road.

No. 5, originally the Nisshin Kisen Kaisha Building, was designed in Beaux-Arts style by Lester Johnson and Morriss, in 1921. In 1999 the address was rebranded by Bund revival pioneer Michelle Garnaut, whose seventh-floor M on the Bund restaurant and Glamour Bar have won a

Tropical **Modernity**

Cosmopolitanism is an essential trait for any city with aspirations to global status. In itself, however, the cosmopolitan idea is too abstract and empty, or at least indeterminate, to provide adequate guidance into Shanghai's dominant cultural traditions.

The economic and communicative shrinkage of the world makes modernity, no less than urbanism, inherently cosmopolitan. Since the 1960s, postmodern critics have reconstructed (and 'deconstructed') a model of cosmopolitan modernism that conforms to the vision of its most verbally articulate architectural proponents. This vision identified itself with the 'International Style', characterized by austerely functional, geometrically pure designs. By eliminating every element with discernible historical or cultural reference, such designs aspired to universal validity and relevance. The result was a negative cosmopolitanism, conceived as an escape from the trap of native peculiarity. This claim to cultural neutrality and universal authority has been the basic object of postmodernist disparagement, and the widespread social disaster associated with this philosophy of urban construction in Western countries ('the projects') did much to legitimate the postmodern case. In elite and popular opinion alike, high modernism, as represented by its supposedly mainstream traditions in urban planning and architecture, became associated with an arrogant insensitivity to local realities, and a self-deluding confidence in its own objective inevitability.

The importance of Shanghai to this discussion, is that it entirely disdained the modernism of the International Style, at least until very recent times (see p.175). Its high modernity was constructed in the more luxuriant or tropical styles that are today grouped together under the label 'Art Deco', in retrospective reference to the Paris Exposition Internationale des Arts Decoratifs of 1925. Where the International Style rejected every kind of superfluity, Art Deco reveled in cultural complexity, arcane symbolism and opulence of reference, borrowing freely from the temples of ancient Egypt and Mesoamerica, ballistic technology, science fiction objects, her-

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metic glyphs and alien dreams. Fusing streamline design trends with fractionated, cubist forms and the findings of comparative ethnography, it created a luscious cosmopolitan style, perfectly adapted to the Shanghai of the early 20th century.

Shanghai has been as thoroughly saturated with Art Deco heritage and influence as any city in the world. Examples include such treasures as the Capitol Building (146 Huqiu Lu, CH Gonda, 1928), the Grand Theater (now Grand Cinema, 216 Nanjing W. Rd, Hudec, 1928), the Peace Hotel (Bund 19-20, Palmer & Turner, 1929) and the Paramount Ballroom (Yang Ximiao, 218 Yuyuan Rd, 1932). An especially stunning Art Deco cluster can be found at the 'Municipal Square' intersection of Jiangxi Middle Road and Fuzhou Road, dominated by Hamilton House (Palmer & Turner, 1931), the Metropole Hotel (Palmer & Turner, 1934) and the Commercial Bank of China (Davies, Brooke and Gran, 1936). Much of this fabulous architectural legacy has been documented in the work of local photographer Deke Erh.

Art Deco styling became so deeply infused into the fabric of the city that its patterning and distinctive motifs (such as sunbursts, zig-zags and mystical signs) can be seen on innumerable lilong gateways from the 1920-40s. At another extreme, the city's ultramodern Jin Mao Tower in Lujiazui (88 Century Avenue) synthesizes crystalline forms, pagoda segmentation, and patterns derived from traditional Chinese numerology, under the guidance of unmistakable Art Deco influences. An even more pronounced example of contemporary Art Deco construction and decoration is provided by the new Peninsula Hotel, which has been meticulously designed as a conscious tribute to (and revivification of) Shanghai's high modernist style.

In constrast to the austerity of the International Style, the tropical abundance of Art Deco produces a positive cosmopolitanism, advancing to the universal by way of comprehension and synthesis, rather than exclusive purification. It makes itself global by drawing everything foreign into itself, rather than by divesting itself of native traits. From this difference, much follows.

In the West, a generalized disillusionment with modernism, resulting from harsh historical experiences, civilizational guilt, and relative geostrategic decline, found articulate expression in postmodern arguments and, more popularly, attitudes. These stances achieved a measure of coherence through a critical construction of modernism, modeled on the International Style. Postwar trends in urban development, based on rigid zoning, geometrical rationalization of the cityscape, and blandly uniform mass residential highrise blocks, seemed to exemplify an archetypal modernist mentality. Urban modernity was contrued as something that had been tried, seen, understood, judged, and rejected. The postmodern cultural episode ensued.

Art Deco, however, eluded this entire dismal progression. An assertively modern, comprehensive style that had embraced the machine age and a communicatively interconnected world, it remained wholly untainted by the minimalism and masterplanning of the International Stylists. The thunderous culture clash between 'modernists' and postmodernists that resounded through the Western world in the late 20th century bypassed it completely. Art Deco thus represents an unprocessed or undigested modernity, still pulsing with historical enigma and unexhausted potentialities. The continuing vibrancy of Art Deco is misapprehended by notions of anachronism or nostalgia, since it is a style that has never been concluded, delimited, surpassed, or adequately evaluated. It is the almost infinitely complex symbol of a prematurely discarded modern spirit, re-animated spontaneously by the renewal of modernity itself. Art Deco's persistent and compelling claim upon aesthetic, intellectual, and even political attention are nowhere more obvious than in contemporary Shanghai. ✖

Max Pub

When we walked into Max Pub to find a burly man in sunglasses singing Shania Twain's 'Man, I Feel Like a Woman' we weren't sure what to expect. But, in no time at all, the friendly staff had found us front row seats for the football and the band turned out not to be so bad. The mixture of sports screens, pool tables and retro college posters of Led Zeppelin, Rocky and Green Day all made for a relaxed setting where punters and staff seem to be genuinely entertained. Beer comes in three different sizes (RMB30-150) or you can heat up the night with a Flaming Lamborghini Bikini (Kahlua, Baileys, Cointreau, Sambuca, blue Curacao and Galliano) for RMB100. Can't finish a bottle? They'll gladly reserve it for you next visit. Handy to know should you decide to make this place your local watering hole – which you might well want to do.

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Soar Point

Architectural eclecticism has long been a Shanghai characteristic. The arrival of Reform and Opening in the city, however, was accompanied by an entirely new level of physical diversity, as fundamentally distinct urban development models proliferated, proceeded in parallel, and simultaneously flourished. Conveniently enough, the clearest example of this can be seen in the city's most conspicuous development zone, the Pudong New Area, and most particularly in the city's new financial center and skyscraper soar core of Lujiazui.

Le Corbusier, pioneering hero of the International Style, notoriously called for the leveling of downtown Paris in order to make space for its rationalized reconstruction and redevelopment. This dream of beginning (again) from zero was characteristic of the movement he represented, with its uncompromising attachment to the idea of 'the plan', conceived on a stupendous scale. Given Le Corbusier's rallying cry "Architecture or Revolution", it is perhaps ironic that this conception resonates so perfectly with the words of Chinese revolutionary and modernist master-planner Mao Zedong, who famously declared: "On a blank sheet of paper free from any mark, the freshest and most beautiful pictures can be painted."

It is perhaps even more ironic that it was in Shanghai, organically shaped over an unplanned history, with its twisting roads, labyrinthine enclaves in a bewildering urban cosmos, enabling the city's patchwork of migrants to settle in transplanted villages, often differentiated by regional background and dialect. They were also warrens of commercial activity, with traders catering both to the crowds outside and the needs of residents, while an intricate system of cascading subletting turned even humble residents into the proud landlords of divided and redivided living spaces. Literary representation of life in the lilongs can be found in popular plays such as 'The Seventy-Two Tenants' and 'Under the Eaves of Shanghai'.

Countless lilongs remain within the downtown areas of today's Shanghai. Tucked away off the main streets, they are easily missed by unobservant passers-by, but no exploration of the city is complete without a digression into their delightful urban mysteries. Although they are still guarded, curious sightseers need not feel inhibited about entering the enclosed community space to look around.

The city's landmark Xintiandi development marked a watershed in the appreciation and sensitive restoration of Shanghai's lilong heritage. Developed by the Hong Kong-based Shui On Group in cooperation with the Luwan District Government, Xintiandi ('New Heaven and Earth') is only one part of the large-scale Taipingqiao development: a 52-hectare project which has been constructed in phases around the small Taipingqiao Lake. It consists of two blocks of restored shikumen houses around Xingye Road and Taicang Road, refashioned as bars, restaurants and boutiques, and has quickly grown into one of the city's most successful leisure and tourism destinations, setting an example of restoration-based development with resonance far beyond Shanghai.

Within Xintiandi, the Wu Li Xiang Shikumen Open House Museum presents a portrait of *shikumen* life in the 1920s, describing how the *shikumen* style emerged and sketching the history of the area's development. Of particular note in the museum is the restored *tingzijian*, exemplifying a type of small, north-facing room with similar literary-historical connotations to the English garret, in which writers such as Lu Xun and Ba Jin gave birth to 'tingzijian literature'.

Native Modernity

Shanghai's modernist heritage is represented by an impressive number and variety of foreign buildings, contributing enormously to its characteristic architectural eclecticism and historical grandeur. Yet for sheer physical mass, as well as practical inventiveness, this legacy is greatly outweighed by that of the city's native modernist tradition, which has been incarnated in the distinctive architectural innovation of lilong housing.

The word 'lilong' stems from the Chinese 'li' meaning community (more precisely a group of 25 families), and 'long' meaning lane, hence 'lane-housing' as a common and acceptable translation, corresponding directly to the alternative and widely-used Chinese expression 'longtang'. The lilongs developed in stages from the late 19th century, with their most characteristic shikumen (or 'stone-gate') features emerging during the early 1880s. An eminently practical solution to the rising population densities of the city, following the mass influx of refugees from the Taiping Rebellion, they combined British industrial revolution terrace housing with traditional Chinese courtyard arrangements in a unique hybrid form of residential construction.

Each lilong block subtly combined public and private space in a housing complex built around shared laneways, separated from the city's traffic arteries by a guarded gate. The outer surface of the block provided retail space for small businesses, fronting the public streets, while the interior sheltered a mix of private residential space and common facilities. As the form developed from the Old Shikumen Lilongs it variegtated into New Shikumen Lilongs, New-type Lilongs, Garden Lilongs and Apartment Lilongs.

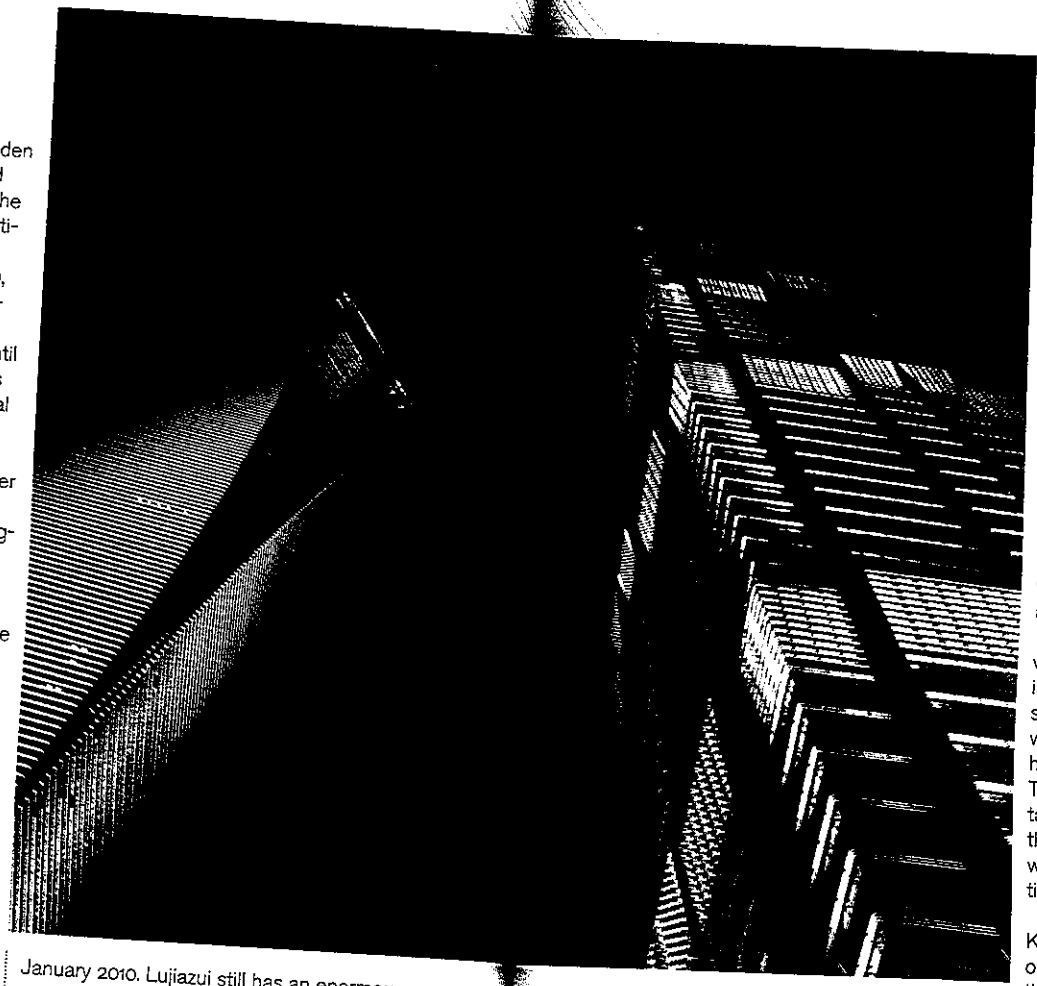
The lilongs were secure

Reach for the Sky

Shanghai first became China's highrise center during its classical modernist 'Golden Age' in the early 20th century, when Bund buildings such as the Cathay Hotel and the Bank of China Building competed for vertical supremacy. Laszlo Hudec's 84-meter neogothic Park Hotel (170 Nanjing W. Rd), situated to the north of the colonial Racetrack (now People's Park), was the tallest building in Asia until 1952, and in China until 1966. Scattered throughout the core areas of the former Anglo-American International Settlement (the Bund, eastern extremity of Suzhou Creek, and Nanjing Road) are numerous testaments to the first skyscraper age, including the Cathay Hotel (now the northern wing of the Peace Hotel, 21 Zhongshan E. 1st Rd), the Bank of China Building (23 Zhongshan E. 1st Rd), and Broadway Mansions (20 Suzhou N. Rd).

Shanghai rejoined the global highrise race in the early 1990s and has remained a serious contender ever since (or at least, until the completion of the Burj Khalifa, Dubai, in 2010). Impressive highrise clusters can be found in many places throughout the city, including – but by no means restricted to – People's Park (Shimao International Plaza, 333m, 819 Nanjing E. Rd, and Tomorrow Square, 285m, 399 Nanjing W. Rd), Nanjing West Road in the Jing'an District (Plaza 66, 288m, 1266 Nanjing W. Rd, and the new Wheelock Square Tower, 290m, at the intersection of Nanjing W. Rd and Huashan Rd), and Xujiahui (Grand Gateway, 262m, 1 Hongqiao Rd). It is Lujiazui, however, that represents the city's indisputable soar core.

The earliest plans for the city's new Pudong financial center envisaged three supertall towers, in addition to the Oriental Pearl Television Tower, and these have been stepping upwards into the heavens in progressive increments. The 420-meter Jin Mao Tower, completed just before the end of the last millennium, was overshadowed by the 492-meter Shanghai World Financial Center (SWFC) in 2008. The SWFC was the world's tallest building, prior to the completion of the 828-meter Burj Khalifa in Dubai, in early January 2010. Lujiazui still has an enormous vertical leap underway, up to the 632 meters of the Shanghai Center, scheduled for completion in 2014.



The Oriental Pearl Television Tower (1 Century Avenue) was completed in 1994, soon after Reform and Opening reached Shanghai, and quickly became an iconic structure, visited by million tourists each year. At 468 meters it is the tallest television tower in Asia, and the third tallest in the world. The pearl symbolism, incarnated in giant pink globes, have multiple national and local references, that include Shanghai's historic title as 'the pearl of the Orient'. Nestled in the basement of the tower, the Shanghai History Museum brings the city's past to life through extensive use of detailed dioramas, while offering a reliable guide to its present self-understanding, pre-occupations and character.

The 88-story Jin Mao Tower (88 Century Avenue) was designed by Skidmore, Owing and Merrill (SOM, architects of the Sears Tower, John Hancock Building, and Burj Khalifa). In Art Deco style (echoing the Park Hotel), it overflows with referentiality, to pagoda segmentation, bamboo, crystal formations, and the number eight (which is auspicious in China). Metallic lattice sheathing completes its distinctive character. Floors 53 to 88 are occupied by the Grand Hyatt Hotel, whose stunning atrium cores-out the entire upper-section of the tower. A separate high-speed elevator accesses an 88th floor observation deck, and annexing the building is the J. Life lifestyle mall.

The Shanghai World Financial Center (SWFC), designed by Kohn Pedersen Fox, is affectionately described as 'the bottle-opener', but this entirely fails to capture the exquisite subtly of its geometric form, which seems to change shape from different persepctives. Conceived by developer Minoru Mori, with explicit reference to Le Corbusier, as a 'vertical complex city', the 101-story tower contains the city's most exclusive office space, retail and dining venues, and the Park Hyatt Hotel (occupying floors 79-93). It also provides an independently-accessed observation deck.

The Gensler-designed Shanghai Center will be the first supertall double skin building in the world, consisting of nine stacked segements, internal gardens, and integral wind turbines, making it the most comprehensively planned eco-structure in history. The design echoes the formal twist and rectangular notch of the SWFC, coordinating the composition of the Lujiazui hypertowers, while hugely increasing the vertical differentiation of the city.

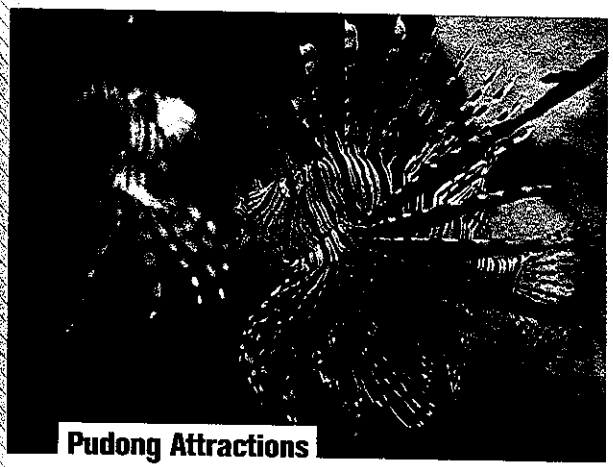
The preposterous loftiness of the Burj Khalifa has so radically changed the terms of the international skyscraper space race that future developments have become difficult to anticipate. After the completion of the Shanghai Center in 2014, will Shanghai return to a new round of global highrise competition, with architects and developers everywhere re-setting their aspirations to the previously unimagined 1-km level? Is the rate of ascent for supertall towers actually accelerating? Whatever the case, the flight to the skies has already shaped Shanghai's neomodern development at the turn of the 20th century, just as it did the modern development at the turn of the 19th, and if history is a reliable guide, the continuing temptation to express soaring economic growth in vertically-pioneering architecture will prove difficult for the city to resist.

rinthine laneways, and delightfully walkable architectural clutter, that such a 'blank sheet' was actually found. In 1992, faced with gathering conservative resistance to Reform and Opening, Deng Xiaoping undertook a now legendary 'southern tour' (nanxun) through the country's thriving Special Economic Zones, congratulating them on their extraordinary advances, and advocating the extention of their development approach throughout the country. In Shanghai, he expressed regret that the city had been held back from the forefront of the reform process, and suggested that previous restraints on the rapid development of China's commercial center be removed.

Foremost among the Special Economic Zones was Shenzhen, home to the country's only stockmarket at the time, and a city of millions, with rapidly increasing prosperity, where only a humble fishing village had existed before. The possibility of such creation *ex nihilo* in China's largest city, Shanghai, might easily have been thought unimaginable, had not the eastern side of the Huangpu approximated to exactly such a developmental degree zero. Here lay the blank sheet, not at the distant outskirts of the city, but directly opposite its historic financial center of the Bund. The city's eastern limit became, instantaneously, the centerpoint of a virtual Shanghai, extending both east and west from the river, with twin downtown hubs facing each other across the water. In this vision, the Pudong New Area was conceived.

With its long straight roads, coherent geographical organization, pre-plotted park space, and monumental highrises, Pudong introduced the elementary tenets of the International Style to Shanghai for the first time. It is important to note that, even here, the city's insistent eclecticism won over the planners. Crucially, the three supertall towers built or under construction in the center of Lujiazui are singular and idiosyncratic, rather than stylistically-coordinated. The design and construction of each was contracted out to a different architectural company, and only the Shanghai World Financial Center (SWFC) can be considered an exemplar of pure geometric principle (see pp.176-7). Despite such qualifications, however, the basic fact remains: a species of modernity that Shanghai had completely bypassed was now finding uninhibited expression beside its historic heart.

The dual developments of the Bund and Lujiazui, on opposite sides of the Huangpu, amounts almost to an elaborate urban dialog, at once rivalrous and



Pudong Attractions

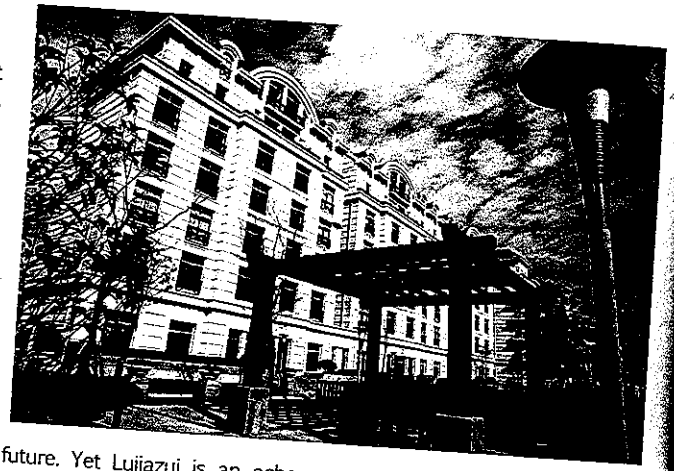
Lujiazui's supertall towers, with their observation decks, skybars, and restaurants, might be the area's most obvious draws, but they have plenty of competition. A magnet for shoppers is the huge Superbrand Mall (168 Lujiazui Rd), which contains some of the city's best child-oriented stores, as well as a large range of dining options, a cinema and an ice rink. Many of Shanghai's most appealing tourist destinations are located in the immediate vicinity, including the Shanghai History Museum, located in the basement of the Pearl Tower (1 Century Avenue), the state-of-the-art Shanghai Ocean Aquarium (1388, Lu jia zui huan Rd), and the kid-friendly Shanghai Natural Wild Insect Kingdom (1 Fenghe Rd, near Binjiang Avenue), packed with bugs, reptiles, and small mammals.

Beneath the Aquarium there is an entrance to the bizarrely entertaining Bund Sightseeing Tunnel, which exits on the Bund side by the Statue of Chen Yi (Shanghai's first mayor). The name is a little misleading, since the only sights on show are themed psychedelic displays, but adults will probably enjoy the weirdness, and kids will love it.

At its south-eastern end, Century Avenue connects to Century Park, the city's largest. This area contains two of the Shanghai's most impressive cultural institutions, the Science and Technology Museum (2000 Century Avenue) and the Oriental Arts Center (425 Dingxiang Rd, near Yinghun Rd).

The Science and Technology Museum occupies a fabulous space age building, and contains a number of large walkthrough galleries, spectacular exhibits, interactive displays, and a Children's Science Land. Its large-scale audiovisual media include a 3D IMAX theater and '4D' iWerks theater (both in Chinese only).

The new Oriental Arts Center, designed by French Architect Paul Andreu and completed in 2004, is a Chinese architectural landmark. It accomodates a 1,979-seat philharmonic orchestra hall, a 1,054-seat lyric theatre, a 330-seat chamber music hall and an exhibition space, as well as the cathedral-like entrance hall. Casual visitors will be especially entranced by the small Shanghai Gallery of Antique Music Boxes inside, displaying antique gramophones, symphonions, dancing dolls and cylindrical music boxes.



complementary, that mixes ostentation, competition, reciprocal specialization, historical debate, future speculation, and complex interdependence. It can seem as if each drives the other into a stereotypical position, exaggerating contrast, as if a sedate colonial past conversed with an exuberant Chinese future. Yet Lujiazui is an echo as well as an argument, the highrise icon and financial center of a new age, attracting international businesses and investment, and recalling the city's history as a global economic hub.

Beyond the symbolism of this dual urban core is a functional interconnection, built primarily in the realm of spectacle. Each looks out upon the other, as the best vantage from which to observe the other, so that to drink or dine on the Bund is to gaze at Lujiazui, and inversely. Since each side serves as the viewing platform for the other, and even as an advertisement for the other, their mutual dependence and escalating interactive entertainment strongly promotes co-evolution. The more spectacular Lujiazui becomes, the more people flock to the Bund to enjoy it, in an urban reflex of such straightforward practicality that it is difficult for newcomers today to imagine the attractions of the Bund promenade prior to the 1990s, when Lujiazui had yet to fill the skyline. In contemporary Shanghai, the greatest reason to visit the Bund is Lujiazui, and reciprocally.

For years after development began on the eastern side of the Huangpu, proud Puxi residents insisted that "a bed in Puxi is better than an apartment in Pudong." Such declarations have all but disappeared in more recent times, as Pudong's initially tenuous social fibers have thickened and rooted, shops, restaurants, entertainment venues, and other amenities have established themselves, and organic evolution has erupted. Pudong's various highly-planned urban environments, ranging from the financial downtown to highrise residential communities, industrial estates, and expatriate enclaves, are undoubtedly thriving. This development poses an obvious question, of great significance to the world's large cities and their future: Why does urban planning in the International Style, which failed so uniformly and incontestibly in the West, turn out to be demonstrably functional in the East?

Any plausible answer to this question is unlikely to be a simple one. It relates to wider questions about the balance between planning and spontaneity in functional social systems, and even in complex technologies (see p.66). It draws attention to associated social scientific mysteries, such as the sources of civil order and harmonious co-existence. It is also questionable in itself, since the applicability of the International Style model to superficially comparable East Asian developments has yet to be solidly established (despite the explicit pronouncements of key practitioners making precisely this connection, such as SWFC developer Minoru Mori). Yet however this discussion proceeds, it seems both inescapable and potentially highly productive. For those seeking to unlock the secrets to better cities and better lives, there is no better place to start than Pudong. ✖

SpaShining

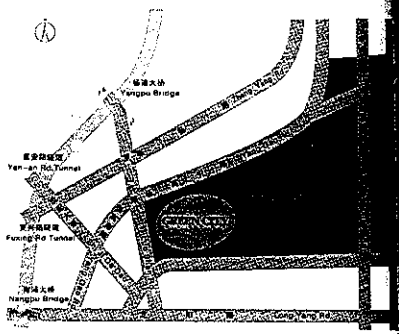
An internationalized city can draw upon the best of the world to ensure excellence in every field. Nowhere is this seen more clearly than among Shanghai's flourishing spas, where the world's most trusted brands compete to refresh and rejuvenate the city-worn bodies of locals and visitors. Among such brands, none has a more glistening reputation than SpaShining.

SpaShining's six Shanghai branches offer the most comprehensive range of body pamperings and treatments to be found in the city, with Malaysian master masseurs and masseuses employed to ensure that traditional massage practices are maintained to the highest standards. The luxury South-East Asian spa offers an exceptional range of spa services, from a variety of massage treatments, to facials and slimming. Club members are able to draw upon the expertise of a personal consultant to help them improve their appearance, body shape, meridians and mental freshness.

Especially recommended SpaShining massage options include its Malaysia Traditional Massage, a soothing, top-to-toe rebalancing of mind and body, and its signature Shining's Massage, which combines four different therapy skills from Thailand, Japan, Hawaii ,and Nordic. This treatment uses aromatic oils to restore vitality and healthy physical function. For more information, visit the SpaShining website at www.spashining.com

Homes Away from Home

If Puxi represents the historical Shanghai, and Lujiazui represents the city's second-wave modernity, Biyun manifests the city's traditions of international hospitality at their most uncompromised. Pudong's fresh expanses provided development space for a reconfigured international Shanghai, adapted to the needs of transient expatriate populations seeking a smooth and comfortable sojourn in the city, without deep insinuation into its downtown fabric. The Jinqiao Export Processing Zone, exemplifies this prosperous international belt. Appropriately, the name Jinqiao means 'Golden Bridge'.



The entire Jinqiao Export Processing Zone occupies roughly 27 square kilometers of Pudong, on land that belonged to the city's rural outskirts just two decades ago. Ultimately, the area will encompass an area of 90 square kilometers. Today it is a magnet for overseas and domestic investment, attracted by the growing cluster of varied high-technology, creative, research and service industry parks. A substantial expatriate population has accompanied this influx of business activity, with many foreign families choosing to live in neighborly communities in the area.

As the Jinqiao E.P.Z. economy matures, the area's light-manufacturing facilities have been incrementally transformed into research and office space, set in a landscaped environment that includes a small lake. The development targets the needs of world top 500 enterprises and their research centers. Currently on the 15 square-kilometer's land, there are already more than 20 top multinational corpora-

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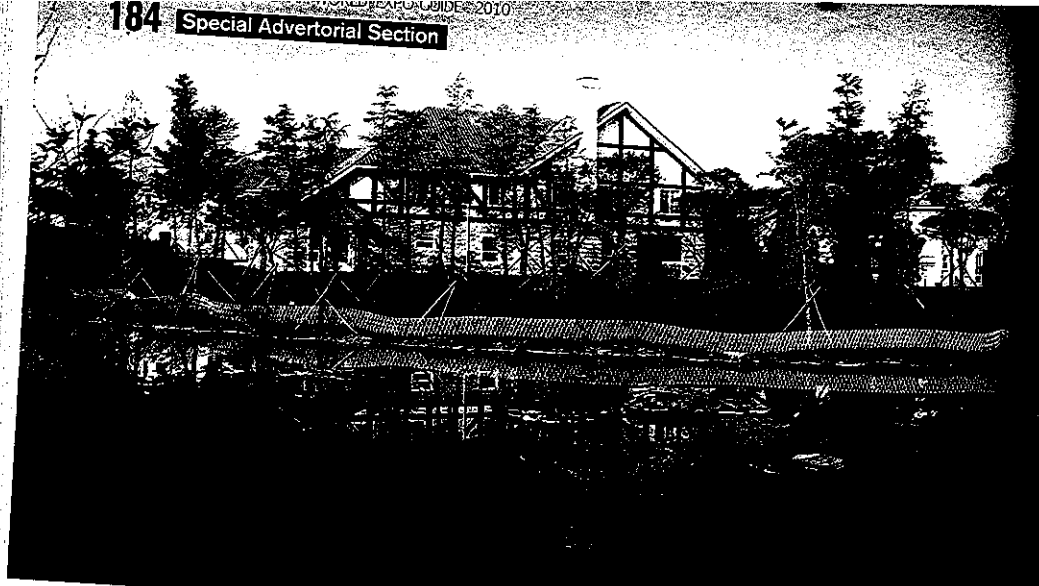

tions, the including General Motors Corporation, a video communication base operated collabotatively by China Telecom, Datang Telecom, and other telecommunications corporations. As manufacturing activities are phased-out over the next five years, they will be replaced by service and outsourcing businesses. The entire zone will be expanded to 60 square kilometers, hosting more than 50 multinational enterprises from the World Top 500.

The Jinqiao lifestyle is epitomized by the Biyun International Community (called 'Green City' due to its good environment), a Shanghai Classic Architecture Award-winner for its diverse developments in American, French, British, and Spanish styles. Elegant apartment buildings are mixed with European style villas, among abundant green space. In these quiet peripheral settlements, foreign professionals and their families can select their own preferred degree of assimilation to the local Shanghai environment, while maintaining aesthetic

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